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CANADA
MEDICAL & SURGICAL
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A Monthly Record of Medical and Surgical Science.

EDITED BY

GEORGE ROSS, A.M., M.D.,
Professor of Clinical Medicine, McGill University; Physician to the Montreal General Hospital.

T. G. RODDICK, M.D.,
Professor of Clinical Surgery, McGill University; Surgeon to the Montreal General Hospital, etc.

AND

JAMES STEWART, M.D.,
Professor of Materia Medica and Therapeutics, McGill University.

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INDEX TO VOL. XV.

PAGE
Abortion, Hæmorrhage after 540
" Fatal Case of 50
Abscess, Post-partum Pelvic 331
" Case of Cerebral 366
" Cerebral, from Disease of Ear. 660
" Cold, treated by Iodoform .. 672
" Gonorrhœal, Tubo-Ovarian. 221
Act, Medical, Amendments to the .. 252
" " Changes in the 55
Address, Valedictory 577
" Presidential, Dr. Holmes' .. 65
Ainhum, Case of 124
Alexander's Operation 220-125
Alimentation and Sanitation in Sickness 270
Alloway, Dr. T. J.:
On Pelvic Abscess 331
Gynecological Cases.....226, 409, 536
On Puerperal Fever. 17
American Public Health Association 245
Aneurism, Aortic, Case of 364
" " 728
" of Innominate Artery 493
" Treatment by Steel-Wire. 87
" Aortic, Case of 243
Angioma, Treatment of 91
Antifebrine 501
Antiseptics in the Primary Syphilitic Jere 738
Antipyrine, Action of 314
Anus, Delivery through the 166
Aorta, Aneurism of, Case of 364
" " " 243
Arnott H., Dr. Phosphaturia 717
Arsenic, for Skin Diseases 442
Arterio-sclerosis 498
Artery, Innominate, Aneurism of ... 493
Arteries, Superior Thyroid, Ligature of 479
Arthritis, Rheumatoid 616
Arytenoid Cartilages, Disease of 610
Association, British Medical 505

Bacillus, Tubercular, Recognition of. 563
Bell, Dr. James:
On Tracheotomy 112
On Gunshot Wounds of Chest 1
Wound of Internal Jugular 467
Berlin, Letter from 531
Blackader, Dr. A. D., on Bromide-Rashes 515
Bladder, Tubercular Disease of 435
" Intra-Peritoneal Rupture of 673
Blood and Blood-forming Organs ... 311
" Clot, Healing under 297
" Coagulation of the 625
Brain, Surgery of the 288, 660
" Abscess of 366
" " " Case of. 370
" Embolism of (Puerperal) 435
" Removal of Sarcomatous Tumor of 669
Brain, Removal of Sarcoma of 670
" General Paralysis of 562
Bray, Dr., Treatment of Pneumonia. 556
Breast, Cancer of 615
Bromides Producing Skin Affections. 515
Bright's Disease, Chloride of Sodium in 168
British Columbia Medical Council... 751
Brown J. P., Dr. Injuries of Elbow Joint 712
Buller, Dr. F.:
On Tumor of Optic Nerve 306
On Acute Purulent Ophthalmia.. 124
Valedictory Address 577

Cachexia Strumipriva. and the Thyroid 478
Cadaveric Rigidity. What is It? 497
Cæsarian Section, Case of 652
Campbell, Dr. F. W., on Quinine in Pertussis 122
Campbell, Dr. J., on Placenta Prævia 12
Cameron, Dr. J. C.:
On Fœtal Heart-sounds 392
On Aseptic Midwifery 462
Canadian Medical Assoc..61, 101, 127, 762
Cancer of Breast 615
" Colloid, of Rectum 367
" of Stomach, Diagnosis of 499
Cartilages, Displaced Semilunar .. 673
Castration, The Question of 393
Catarrh, Chronic Nasal 583
Cerebral Surgery 483
" " Case of 236
Cervix, Division of, in Anteflexion .. 401
" Stenosis of, Cases of 536
" Uteri, Laceration of 713
Chest, Gunshot Wounds of 1
Cirrhosis of Liver, Apiration in 730
Clark, Dr. Daniel, on Crime and Responsibility 129
Club-foot, Treatment of 91
Cocaine, Uses of 480
College of Physicians and Surgeons. 57
Comparative Medicine in Europe ... 520
Congress of Special Associations 255
" German 699
Constipation, Chronic 370
Convulsions, Localized Uræmic 641
Country Resorts 756
Cord, Anomaly of 752
Crime and Responsibility 129
Cyst, Dermoid 612
" " with Twisted Pedicle .. 513
" of Thyroid, Treatment of 476
" Retro-Peritoneal, of Loin 552
" of Broad Ligaments, Cases of . 234
Cystoma, Ovarian, Case of 365

Demoniaques les, dans l'art 701
Diaphragm. Danger of Wounding the 291
" Hernia of 484

7942

PAGE
Diphtheria Complicating Typhoid Fever.................. 494
“ Paralysis after.......... 619
“ Inhibition of Heart in.... 141
“ Ear Disease in.......... 172
Diphtheritic Paralysis, Pathology of. 174
Dislocation of Metatarsal Bones ... 147
Dressing, Original Method of 89
Duodenum, Ulcer of 449
Dupuytren's Contraction..............545

Ear Disease in Diphtheria and Scarlatina 172
Eclampsia, Puerperal, On........... 545
Ectropion, The Inflated Ring for.... 400
Elbow Joint, Injuries of............. 721
Electricity in Gynecological Practice 403
Electrolysis in Treatment of Stricture 80
Embolism, Case of Cerebral. 435
Empyema, Methods of Drainage in.. 694
Endocarditis, Ulcerative, Case of .. 235
“ Acute Recurring 746
Enemata, Gaseous, in Phthisis 445
Environment, Adaptation to........ 697
Epilepsy following Fracture of Skull 96
“ Psychical 565
“ Trephining for............ 667
Epididymitis, Treatment of......... 90
Epithelioma of Uterus................ 158
Ergot after Labor 402
Erysipelas, Treatment of........... 294
Etherization, Rectal................. 696
Eyes, Transplantation of........... 90

Fallopian Tubes, Pathology of the.. 655
Fees of Noted Physicians............ 192
Feet, Lupus of the.................... 158
Femoral Artery, Laceration of...... 737
Fenwick, Dr. G. E.:
  On Tuberculous Glands......116, 207
  On Amputation for Sarcoma.. 125
Fenwick K. N., Dr. Laceration of Cervix Uteri..................... 31
Ferguson J., Dr. Arsenical Neuritis. 716
Fever, Typhoid, Bacillus of......... 504
“ “ complicated with Diphtheria 494
“ Puerperal 621
Fingers, Reunion of Cut-off......... 483
Fluorine, Isolation of............. 502
Fœtal Heart Sounds, Propagation of. 392
Fox G. H., Dr.:
  Surgical Treatment of Skin Diseases.......................... 737
  Common Errors in Treatment of Skin Diseases 747
Fracture, Ununited of Humerus..... 407
Frontal Bone, Compound Fracture of 95
Funerals............................ 757

Gall-bladder, Case of Perforation of. 427
Galvano-Cautery, Notes on Chemical 385
Gangrene, Pulmonary............... 503
Gardiner. Dr. J. H., Heart Affection in Diphtheria 141
Gardner, Dr. Wm.:
  On Chemical Galvano-Cautery .. 385
  On Dermoid Cyst.... 513
  Quarterly Retrospect of Obstetrics and Gynecology..220, 393, 650
  Case of Tait's Operation......... 436
  Abdominal Surgery in Europe... 257
  On Ovariotomy during Pregnancy 234
  Case of Retro-peritoneal Cyst.... 552
  Cysts of Broad Ligament........ 234

PAGE
Gastrostomy for Œsophageal Cancer. 441
Genesis of the Elements............. 316
Gillies, Dr. T. J., on Pneumonia.... 6
Glanders, Chronic 566
Glands, Surgical Treatment of Scrofulous 83
“ Tuberculous, Treatment of.. 116
Glottis, Intubation of the 295
Goitre, Ligature of Thyroid Arteries for 479
“ Operative Treatment of...... 477
Gooding, Dr. C. E., Case of Superfœtation 353
Graves' Disease........................ 731
Groves A., Dr. Prostatotomy....... 715
Gynecological Cases................... 409
Gynecologists v. General Surgeons.506,569

Hænatozoa of Malaria 564
Hæmodynamics and Blood-pressure. 372
Hæmorrhage, Meningeal, Trephining for 470
“ Uterine, after Abortion 540
Hæmorrhoids, New Operation for... 482
Hæmatocele Pelvic 741
Hands, Disinfection of the.......... 294
Heart, Extreme Dilatation of the 435
“ Inhibition of, in Diphtheria . 141
“ Beat, Causation of the........ 321
“ Irritable, in Civil Life........ 617
“ Rupture of, Case of 369
“ Sounds, Propagation of Fœtal. 392
Hepatic Surgery, Case of............ 572
Heredity of Acquired Peculiarities.............. ...676, 685
“ On......... 597
Hernia, Reduction of 615
Hip-joint, Gunshot Wound of....... 123
Holmes T. K., Dr.:
  Presidential Address............. 65
  Case of Lithotrity 559
  Puerperal Fever.................. 738
  Intestinal Obstruction........... 738
Hospital, The Royal Victoria.....625, 696
Howard, Dr. R. J. B ,on Dupuytren's Contraction 545
Humerus, Ununited Fracture of..... 407
Hutchinson, Dr. J. A., Cases in Practice 647
Hydatid, Abdominal, Case of........ 120
Hysteria, Diagnosis from Cerebral Disease 308
“ Treatment of Paroxysm of 223
Hysterical Paralysis in a Boy........ 51

Ice, The Bacteria of................. 574
Ichthyosis, Case of 438
Innominate Artery, Aneurism of.... 493
Insanity, Relations of Masturbation to 719
Inspection of Meat... 567
Introductory Lecture, Dr. Shepherd. 193
Intubation of the Glottis............ 295
Iodoform. Is it an Antiseptic?..... 626
“ for Cold Abscesses...... 672
Iodol in Gynecological Practice 176

Jenner, Dr. J. E., on Alimentation in Sickness......................... 270
Johnston, Dr. W. G., on Acquired Proclivities.......... 528

Kennedy, Dr. R., Case of Aortic Aneurism 243
Keratoscopy in Diagnosis of Astigmatism 112

PAGE
Kerr, Dr.:
On Abominal Hydatids 120
On Gunshot Wounds of Hip-joint 123
Kidney, Exploration of, in Tuberculous Pyelitis 389
" Case of Floating 437
" Tubercular Disease of 435
" Irritation of, from Terebene 176
" Glomerular Activity in the .. 249

Labor, Anæsthetics in 398
" Arrest of, by Gastro-Intestinal Flatus 759
Lanolin in Skin Diseases 296
Laparotomies, Severe, After-treatment of 224
Laparotomy, Three Cases of 610
" for Myoma of Uterus .. 222
Laryngeal Tuberculosis, Treatment of 280
Laryngitis, Membranous, Tracheotomy in 112
Larynx, Cyst of 607
" Nutshell in the 597
" Tuberculosis of 742
Lett Stephen, Dr. Relationship of Insanity to Masturbation .. 719
Leprosy, Case of True 432
Leukæmia, Case of 430
Lip, Cancer of, Operations for 293
Lithotrity, Case of 559
Lupus of the Feet 158

MacCallum D. C., Dr. Lying-in-Hospital Report from 1875 to 1883
MacDonnell, Dr. R. L.:
Absence of Petrous Portion 495
On Hernia of Diaphragm 484
Case of True Scurvy 243
Aortic Aneurism 728
Mediastinal Tumor 728
Aspiration in Cirrhosis of Liver. 730
Graves' Disease 731
McDonagh, Dr. Tuberculosis of Larynx 742
Major, Dr. G. W.:
On Laryngeal Tuberculosis 280
On Arytenoid Disease 610
An Improved Nasal Snare 355
Nutshell Removed from Larynx. 597
On Chronic Nasal Catarrh 583
Foreign Body in the Nose 649

Malaria, Hæmatozoa of 564
Male Children, Conception of 178
Malloch, Dr., on Perineal Section .. 623
Masturbation as a Cause of Insanity. 719
Mathews, Dr. P. W., on Phthiriasis. 45
McGannon, Dr. M. C., Case of Aneurism 364
McGill University, Convocation 629
McKeogh, Dr., Case of Rupture of Heart 369
Meat, Inspection of 567
Medical Dinner 383
" Act, Amendments to the ... 252
" " Changes in the 55
Medicine, Comparative in Europe ... 520
" Relation of Surgery to 473
Meningitis, Traumatic, Suppurative. 583
Mesmerism 382
Metatarsal Bones, Dislocation of 147
Milk as a Cause of Scarlatina 162
Mills, Dr. T. W.:
On Causation of the Heart-beat .. 321
On Thrombosis of Ventricle 405
On Heredity 597

PAGE
Midwifery, Aseptic 462
" Chair of, in McGill 181
Murray S. S., Dr. Laceration of Femoral Artery ....
Muslin Plasters in Skin Diseases 297
Myelo-sarcoma, Amputation for 125
Myofibromata, Removal of Ovaries for 222
Myoma, Case of Submucous 364
Myxœdema, Discussion of 608

Naphthalin, Uses of 576
Nasal Snare, An Improved 355
Naturforscher Versammlung 251
Nephrectomy, Successful Case of 89
Nerve, Ulnar, Suture of 350
" Stretching for Sciatica 148
Nerves, Degeneration of 755
Neuritis, Post-febrile 250
" Arsenical 716
Non-heredity of Acquired Peculiarities 528
Nose Foreign Body in the 649
Notes and Comments 764

OBITUARY:

Dr. Wilson Fox 702
" John Fulton 703
" John H. Christie 255
" L. S. Gamgee 255
" J. M. Drake 446
" J. B. Johnston 448
" A. C. Sloan 448
Obstetrical Section, Brit. Med. Asso. 182
Œdema of Glottis, Case of 424
Œsophagus, Cancer of 430
Ontario Medical Association 736, 762
Ophthalmia, Acute Purulent, Treatment of 124, 215
Optic Nerve, Tumor of 306
Orchitis, Treatment of 90
Osler, Dr. Wm.:
On Irritable Heart 617
On Duodenal Ulcer 449
Ovarian Operations, Details of 117
Ovariotomy during Pregnancy 234
" large tumor 236
Ovary, Tumor of 608
" Cystic Tumor of 561

Papillomata, Cases of Laryngeal .. 424
Paralysis, Case of Laryngeal 424
" Diphtheritic 619
" Acute Ascending 627
" General, of Brain 562
" Progressive, Syphilis in ... 698
" Diphtheritic, Pathology of 174
" Hysterical, in a Boy 51
Pasteur on Rabies 507
Patella, Fractured, New Operation for 286
" Treatment of Fracture of 285
Pelvic Hæmatocele 741
Pendulous Belly, Prevention of 224
Penis, Cancer of 623
Perineal Section 623
Peritonitis, Acute, Operation for ... 396
Petrous Portion, Congenital Absence of 495
Phosphaturia 717
Phthiriasis, Notes on 45
Phthisis, Treatment of, by Gaseous Enemata 445
" Treatment of 629
" Bergeon's Treatment of 573
" Gas Treatment of 700

PAGE

Plagiarism Extraordinary ... 218
Placenta, Retention of, after Abortion ... 381
  " Prævia, Cases of ... 12
  " " Management of ... 163
Pleura, Limits of the ... 292
Pneumonia, after Fracture of Skull. 95
  " Treatment of ... 556
  " On ... 6
  " On Contagious ... 108
Pneumothorax, Case of ... 484
Powell, Dr.:
  Sarcoma of Forearm ... 561
  Pelvic Hæmatocele ... 741
Professional Responsibilities ... 164
Proudfoot, Dr., Case of Cerebral Abscess ... 366
Provincial Medical Board ... 180
Prostatotomy ... 715
Prostate Gland, Tumor of the ... 554
  " " Enlarged, with Retention ... 98
Ptomaines, Poisoning by ... 370
Puerpera, Relation of Micro Organisms to ... 17
Puerperal Septicæmia Treated by Curette ... 542
  " Cerebral Embolism ... 435
  " Eclampsia, On ... 545
  " Fever ... 738
Pupil, Clinical Studies of the ... 179
Pyelitis, Exploration of Kidney in ... 389
Pylorus, Cancer of, Cases of ... 433
  " " " ... 439

Quinine in Treatment of Pertussis ... 122

Reed, Dr. T. D., Notes on Urinalysis. 644

REVIEWS:

  Text-book of Human Physiology. Landois ... 232
  Analysis of the Urine. Hofmann and Ultzmann ... 233
  Manual of Physiology. Yeo. 299
  Insanity and its Treatment. Hamilton ... 300
  Diseases of the Nervous System. Gowers ... 301
  Lehrbuch der speciellen pathologie. Strumpell ... 360
  Therapeutical Application of Electrolysis. Armory ... 361
  Manual of Dietetics. Fothergill. 362
  Massage as a Mode of Treatment. Murrell ... 363
  Diagnosis of Diseases of Kidney. Clarke ... 417
  Progressiven Muskelschwund. Schultze ... 419
  Methods of Bacteriological Investigation. Hueppe ... 421
  Pathology and Treatment of Syphilis. Zeissl ... 422
  Rheumatism; its Nature, Pathology, &c. Maclagan ... 422
  Principles and Practice of Medicine. Flint ... 488
  Medical History of Louis Riel, &c. H. Howard ... 489
  On Post-mortem Examinations. Virchow ... 490
  Text-book of Medicine. Strumpell ... 490

PAGE

  Differential Medical Diagnosis. Cutler ... 491
  Milk-analysis and Infant-feeding. Meigs ... 491
  Pharmacopœia of Montreal General Hospital ... 492
  Pathological Anatomy and Pathogenesis. Ziegler ... 682
  A Compend of Surgery. Howitz. 682
  Maternity, Infancy, Childhood, &c. Keating ... 683
  Treatment of Disease in Children. Money ... 683
  Earth applied in Surgery. Hewson ... 684
  Practical Human Anatomy. Weisse ... 37
  Fractures and Dislocations. Pick. 38
  Practice of Surgery. F. H. Hamilton ... 39
  System of Medicine. Pepper ... 41
  Diseases of Stomach and Intestines. Dujardin-Beaumetz ... 42
  Hand-book of Practical Medicine. Eichhorst ... 43
  Surgical Diseases of Kidney. Morris ... 44
  Digestive Disorders in Children. Starr ... 151
  Healing of Arteries after Ligature. Warren ... 152
  Manual of Midwifery. Galabin. 153
  Manual of Practical Therapeutics. Waring ... 154
  Diseases of the Nervous System. Hammond ... 154
  Text-book of Ophthalmoscopy. Loring ... 155
  Lectures on Physiology. Mills ... 156
  Paralyses, Cerebral, Bulbar and Spinal. Bastian ... 231
  Treatise on Obstetrics. Charpentier ... 602
  Materia Medica and Therapeutics. Potter ... 603
  Surgery of the Human Brain. Roberts ... 604
  Diseases of the Ear. Pritchard. 605
  Nursing of the Nervous and Insane. Mills ... 660
  Science and Art of Obstetrics. Parim ... 732
  Manual of Obstetrics. King ... 733
  Drug Eruptions. Morrow ... 733
  Practical Pathology, Stephen ... 734
  Handbook of Practical Medicine. Harmann Eichhoist ... 734
  Bright's Disease, &c. Purdy ... 735
Rheumatism, Cardiac Complications in ... 344
Rigidity, Cadaveric. What is It? ... 497
Ross, Dr. Geo.:
  Case of Puerperal Cerebral Embolism ... 435
  Case of Abdominal Sarcoma ... 303
  Aneurism of Innominate ... 493
  Case of Œsophageal Cancer ... 430

Sarcoma, Abdominal, Case of ... 303
  " of Forearm ... 561
Scarlatina Caused by Milk ... 162
  " Sine Exanthemata ... 175
  " Ear Disease in ... 172
Sciatica, Nerve-stretching for ... 148
Scrofulous Glands, Treatment of ... 83
Scurvy, A Case of True ... 243

PAGE
Septicæmia, Puerperal, Treated by Curette 542
Shepherd, Dr. F. J.:
  Introductory Lecture 193
  On Excision of Tongue 598
  On Suture of Ulnar Nerve 350
  On Exploration of Kidney 389
  Two Cases of Tetanus 533
  Case of Leprosy 432
  Case of Ainhum 124
  Quarterly Retrospect of Surgery 76, 285, 470, 660
Shoulder, Amputation at, for Sarcoma 125
Sir James Grant 760
Skin Diseases, Errors in Treatment of 747
  " " Surgical Treatment of 737
  " Affections from Bromides 515
Skull, Treatment of Compound Fracture of 671
  " Fracture of, with Epilepsy 96
Sleep, The Physiology of 169
Smith, Dr. A. L.:
  On Alexander's Operation 125
  Case of Synovitis 304
  Case of Wry Neck 235
  On Puerperal Eclampsia 545
Smith, Dr. W. R., on Rheumatism 344
Snare, Nasal, An Improved 355

SOCIETY PROCEEDINGS:

  Medico-Chirurgical Society of Montreal 45, 158, 234, 303, 364, 424, 493, 544, 607, 685, 747
  Canadian Medical Assoc 101, 127
  Hamilton Medical and Surgical Society 160, 310, 623
  American Public Health Association 245
  Chatham Medical and Surgical Society 308, 369, 556
  Huron Medical Association 437, 619
  Toronto Med. Soc. 440, 560, 613, 694
  Ontario Medical Association 736, 743
Spleen, Enlargement of 439
  " Excision of the 88
Stewart, Dr. Jas. Case of Leukæmia 430
Stomach, Billroth's Operation on the 294
  " Cancer of, Diagnosis of 499
  " Case of Dilatation of 161
Stricture, Treatment by Electrolysis 80
Strophanthus, Use of 576
Students, Stupidity of 677
Sublimate, Poisoning from Injection of 650
Superfœtation, Possible Case of 353
Suppuration, on the Nature of 377
Supra-renal Bodies, Functions of 444
Surgery, Relation of Medicine to 473
  " Cerebral 483
  " Present Aspects of 686
  " Abdominal, in Europe 257
Synovitis from Congenital Syphilis 304
Syphilis, Congenital, Synovitis in 304
  " as a Cause of Tabes Dorsalis 379
  " Treatment of 479
  " in Progressive Paralysis 698
Tabes Dorsalis from Syphilis 379
Tait's Operation, Case of 436
Temperatures, How to Take, in Children 168
Temple, Dr., on Fibro-myoma of Uterus 560

PAGE
Terebene, Renal Irritation from 176
Tetanus, Pathology of 76
  " Two Cases of 533
Testicle, Enlargement of 438
Thrombosis of Left Ventricle 405
Thyroid, Cysts of, Treatment of 476
  " Removal of, and Cachexia 478
Tongue, Tuberculosis of the 177
  " Excision of the 598
Trachea, Fracture of 557
Tracheotomy in Membranous Laryngitis 112
Trephining for Epilepsy 667
  " for Paralysis of Arm 668
  " for Meningeal Hæmorrhage 470
Trenholme, Dr. E. H., on Uterine Operations 117
Tuberculosis of the Tongue 177
  " following Nephritis 49
  " Laryngeal, Treatment of 280
  " Pharynx 742
Tumor, Cysto-sarcomatous of Ovaries 554
  " Cystic, of Labium 364
  " Mediastinal 728
  " Cystic 747
Typhoid Fever, The Bacillus of 614
Tye, Dr., on Hysteria and Cerebral Disease 308

Ulcer, Duodenal, Cases of 449
Ulnar Nerve, Secondary Suture of 350
University Lying-in-Hospital, Report of 705
Uræmic Convulsions, Localized 641
Urethral Fever, Case of 98
  " " Cause of 753
Urinalysis, Notes on 644
Uterine Appendages, Diseases of 397
  " " Removal of 740
Uterus, Cancerous, Extirpation of 365
  " Forcible Tearing Out of the 653
  " Fibro-myoma of 560
  " Extirpation of, per Vaginam 158
  " Epithelioma of the 158
  " Retroflexion of, New Treatment for 225
  " Carcinoma of, Drainage for 223
  " Myoma of, Extirpation of 222
  " Operations, Details of 117

Vagina, Congenital Absence of the 166
  " Drainage of, for Carcinoma 223
Varicose Veins, Treatment of 481
Vein, Internal Jugular, Wound of 467
Veins, Varicose, Treatment of 481
Ventricle, Thrombosis of Left 405
Vienna, Letter from 34, 144

Whooping-cough, Treatment of, by Quinine 122
Williams, Dr. F. H., on Uræmic Convulsions 641
Wood, Dr. C. A., Case of Cerebral Surgery 236
Worthington, Dr., on Puerperal Fever 621
Wright Adam, Dr. Removal of Uterine Appendages 740
Wry Neck, Case of Congenital 235

Yeomans, Dr. Acute Intestinal Obstruction 738

LIST OF CONTRIBUTORS TO VOL. XV.

Alloway, T. Johnson, M.D.
Arnott, H., M.B.
Bell, James, M.D.
Blackader, A. D., M.D.
Brown, J. P., M.D.
Buller, Frank, M.D.,
Cameron, J. C., M.D.
Campbell, John, M.D.
Clark, Dan., M.D.
Clement, A. W.
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Fenwick, Kenneth N., M.D.
Ferguson, J., M.D.
Gardiner, J. H., M.D.
Gardner, Wm., M.D.,
Gillies, J. T., M.D.
Gooding, C. E., M.D.
Groves, A., M.D.
Holmes, T. K., M.D.
Hutchinson, J. A., M.D.
Jenner, J. E., M.D.
Johnston, W. G., M.D.,
Lett, Stephen, M.D.
MacCallum, D. C., M.D.
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Major, Geo. W., M.D.
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Shepherd, F. J., M.D.
Smith, R. W. B., M.D.
Smith, W. A. DeW., M.D.

CANADA

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CASES OF GUNSHOT WOUNDS OF THE CHEST.

By JAMES BELL, M.D.,

Surgeon-Major in charge of Field Hospital with General Sir Fred. Middleton's Division, North-West Field Force; Surgeon to the Montreal General Hospital.

(*Read before the Medico-Chirurgical Society of Montreal.*)

CASE I.—*Penetrating Wound of Lung; Gangrene; Recovery.*

Corporal J. E. L., 90th Battalion, aged 24, was wounded at the Fish Creek fight on the 24th of April, 1885. He was shot in the chest while lying facing the ravine in which the enemy were concealed, at a distance of about one hundred yards from him. The bullet passed through the second left costal cartilage, beneath the sternum, downwards and outwards towards the right side, making its exit through the 7th rib in the mid-axillary line. Before being removed from the field he also received a flesh wound over the right trochanter major, which, although not in itself serious, added greatly to his sufferings on the journey to Saskatoon and subsequently. He, with the other wounded from Fish Creek, arrived in Saskatoon on the 2nd of May, having been driven forty-five miles in a lumber waggon over the "trail." The period of seven or eight days intervening between the time of his injury and his arrival at Saskatoon was one of very great hardship to a man in his condition. The weather was cold, especially at night, and windy, and a considerable part of the time wet; their only shelter was the ordinary "bell" tent, and there were neither the materials nor the facilities for making warm and soothing applications to the chest, nor was there any suitable invalid diet. On arrival at Saskatoon, his condition was very bad indeed. The greater part of the right lung was consolidated, and his breathing painful and rapid. There was also high fever and troublesome diarrhœa. Empyema followed, and on the 8th of May Deputy-Surgeon-General Roddick enlarged the wound in the right axillary region, evacuating a quantity of pus which was very fœtid. The pleural cavity was then washed out daily with antiseptic solutions (carbolic, alcoholic and boracic at different periods); and from time to time portions of gangrenous lung tissue presented at the wound and were removed. In spite of these precautions, however, he continued to suffer from high fever, perspirations, fœtid discharge, and great weakness. On the 23rd of May, with the advice and assistance of Dr. Roddick, I attempted to make a dependent opening. The patient was etherized and an incision made in the eighth intercostal space, posteriorly. On reaching the pleura, however, the lung was found to be firmly adherent to the chest wall at this point. The wound was therefore closed and the original axillary wound enlarged, and the cavity explored with the finger and long probes. A considerable amount of sloughy tissue was found lying unattached in the cavity, and was removed. The cavity was then emptied as well as possible, and washed out with weak carbolic lotion. On introducing the finger into the cavity, it was found to be as large as a large-sized orange, and surrounded on all sides by pulmonary tissue. It was an intra-pulmonary cavity, and not, as we had supposed, a localized pleural sac. As he recovered from the ether, he was seized with a severe and prolonged fit of coughing, in which he expectorated pus and fluid from the pleural cavity which had a distinct carbolic odor, and caused unmistakeable tingling in his mouth. From this time forward the pus was expectorated constantly and freely, and in a day or two was free from smell. The wounds healed up rapidly. All his symptoms subsided, and from this time his recovery was uninterrupted. In a few days he was able to be taken out into the air and sunlight, and in a couple of weeks was convalescent. He was one of the last remaining patients at Saskatoon, and embarked on the hospital barge on the 4th of

July, and was discharged when he reached Winnipeg on the 15th of the same month. He has since enjoyed the best of health, and at the present time writes that he is quite well and strong. I have no doubt but that the thorough exploration of the cavity and the removal of sloughy tissue on the 23rd of May opened communication with a bronchial tube of considerable size, and that henceforth the cavity was kept freely evacuated by expectoration. This, I think, was the starting point on the road to his recovery, which progressed with marvellous rapidity from that time.

CASE II.—*Penetrating Wound of Chest.*

Private H. H. M., 10th R.G., aged 19, was wounded at Batoche on the 12th of May, 1885. When brought into the zareba he was suffering from dyspnœa and painful inspiration. He had also coughed up a little blood soon after receiving the wound. On examination, a bullet wound was found about an inch to the right of the vertebral column, opposite the fifth dorsal vertebra. The track of the bullet could be traced as far as the vertebral column, passing deeply through the muscles of the back, and the bullet itself (a round one) was felt beneath the skin at the angle of the left scapula. It was immediately removed, and the wounds cleansed and dressed with iodoform. There were no marked chest symptoms until after his removal to Saskatoon, where he arrived on the 15th. The wound was then suppurating freely, and he suffered from considerable pain and uneasiness in the side and high fever. A few days later the left chest was found to be gradually filling with fluid ; a hypodermic needle was introduced, and half a drachm of odorless sero-pus withdrawn. The chest filled rapidly, and the patient suffered from chills and fever. The pleural cavity soon became filled to the apex, and displaced the heart slightly. The flow of pus from the wounds now became greatly increased, and pus was forced out from both wounds, but especially from the posterior one (the wound of entrance of the bullet), on coughing. I then administered ether, and made a free opening through the 7th intercostal space and in the existing wound, and evacuated a large quantity of pus having a slightly fœtid odor. Through this opening also came, at this time, pieces of red cloth from his tunic and pieces of his shirt and undershirt. On examination while the patient was under ether, a long probe passed directly into the pleural cavity from the original wound. The bullet was found to have passed between the spines of the 5th and 6th dorsal vertebræ, close to the bodies of the bones, and to have roughened the edges of both spines. The opening of the cavity and the insertion of a large drainage-tube gave great relief, and all the active symptoms subsided promptly, although the discharge continued for a long time. His recovery was slow. The pleural cavity was washed out with antiseptic solutions from time to time, and nourishing food and stimulants were administered, and the patient was soon able to leave his bed and go out into the fresh air and sunlight in daytime. He was brought down to Winnipeg on the hospital barge, still very weak, and placed in the General Hospital there on the 15th of July, under care of Dr. Kerr. He remained there for some time, and reached his home in Toronto, I believe, about the end of September. He is now perfectly well. There was great retraction of the chest wall during convalescence.

In this connection I wish to mention briefly two other cases which did not come under my observation at the time their injuries were received, but which I saw later on:

Pvte. L., 65th Batt., was wounded on the 28th of May at Frenchman's Butte. He was struck on the posterior wall of the right chest, the bullet making its exit in front at a point nearly opposite. He suffered from severe respiratory symptoms and spat up some blood, and a penetrating wound of the chest was diagnosed. He recovered rapidly, however, and when I saw him on the 12th of July, his wounds being then perfectly healed, there were no chest symptoms, no alteration in the conformation of the chest, and no physical signs to indicate that the pleural cavity or its contents had ever been disturbed in any way.

A similar case was that of Sergt. F., N.W.M.P., who was wounded about a week later, in Steele's engagement at Loon Lake. He also had very severe symptoms of pulmonary injury, dyspnœa, bloody expectoration, hurried breathing, etc., but recovered rapidly and perfectly without any serious pleural or pulmonary inflammation. I saw him on the 18th of July, on his return to Calgary to report for duty. He was then apparently in perfect health.

In gunshot wounds of the chest, the important point in prognosis is, of course, whether the bullet has penetrated the chest walls or not. In the surgical history of the American Rebellion, the mortality in a group of over 8000 cases of penetrating wounds is given at 62.5 per cent., while in a similar group of non-penetrating wounds the mortality is 2 per cent. The four cases which I have reported show the difficulty of making an exact diagnosis, unless the patient can be kept under the observation of the same surgeon throughout his illness ; and as our knowledge of such wounds must be mainly derived from military surgery, this is, of course, nearly always impossible.

Case II of this series was not thought to be a penetrating wound when treated on the field. Cases III and IV were so diagnosed, and yet, I think, the subsequent histories show that Case II was undoubtedly a penetrating wound, and that the others were not. One could hardly help making such a diagnosis, however, with the symptoms shown by these men at the time of receiving the wound—cough, distressed and hurried breathing, and bloody expectoration. The fact that the symptoms did not persist beyond a few days, and that there was no evidence of pleural or pulmonary inflammation, or of the results of such inflammation, makes it quite clear, I think, that these were only wounds of the soft parts of the chest wall, external to the pleura, and the blood expectorated at the time of the wound may be explained by the contusion produced by the bullet. I consider Case I an extraordinary recovery, under all the circumstances, and considering the nature of the injury and its termination in gangrene, which destroyed a large portion of the lung. Empyema followed as a matter of course, but, fortunately, the axillary wound was favorably situated for the evacuation of the pus and the removal of the necrosed pulmonary tissue.

PNEUMONIA.

BY J. T. GILLIES, M.D., TEESWATER, ONT.

(*Read before the Ontario Medical Association.*)

In presenting this subject to the Association, it is not with the object of offering anything new regarding this very common and fatal disease, but for the purpose of arriving at some definite conclusions as to its nature and treatment, that we may be the better enabled to combat it when brought face to face with it.

The report of the Registrar-General for the Province of Ontario shows that it usually stands third or fourth in the list of the ten most fatal diseases. In 1874 it stood second, or next to consumption. In that year, of the 943 who died of this disease, 538 were males and 405 were females, or nearly 33 per cent. more males than females. In 1880 it stood fourth; in 1881, fifth; in 1882, fourth; in 1883, fourth; in 1884, fourth. In my humble opinion, a disease fraught with such great danger to human life demands not only the earnest consideration of every medical practitioner, but of this Association.

There are several varieties of pneumonia, the two principal ones being the croupous and catarrhal. It is upon the former that I intend briefly to offer a few remarks on this occasion.

The specific cause of croupous pneumonia, according to pathologists, is as yet undetermined, and the existence of such a cause is still a matter of doubt. Among the predisposing causes age ranks high. It is met with most frequently between the age of 20 and 40; less so from 40 to 60; very frequently after 60, when it appears to be one of the most fatal of all acute diseases that we have to do with after that period of life.

Pneumonia is a widespread disease. It is to be found in almost every country and clime, but it is far more prevalent in those places that are subject to sudden and varied changes of temperature than where there are extreme degrees of heat or cold. There are certain seasons of the year in which it would appear to be more prevalent than others. Of twenty-four cases that I have taken notes from, six occurred during the month of March, five in April, four in December, three in February, two in May, two in June, and two in November, so that from this report by far the larger number occur between the months of November and May. Men are more liable to the disease than women, due, no doubt, to the fact that they are more exposed to causes which produce pneumonia.

Everything that depresses the vital powers seems to act as a predisposing cause, as, for instance, unfavorable hygienic surroundings, overcrowding, debilitating habits, drunkenness, poverty, etc. Diphtheria, erysipelas, measles and smallpox act in a similar manner. Uræmia, pyæmia, septicæmia, and all that class of disease which depend on the retention of excrementitious matters in the blood, are also powerful predisposing causes. Difficult dentition in children also acts as a predisposing cause. One attack predisposes to another ; every practitioner must find it an occasional occurrence to meet with it more than once in the same individual.

Of the direct exciting causes of pneumonia, a chill appears to be the most common, as, for instance, going into a damp cellar whilst the body is overheated, sleeping on the damp grass, or exposing one's self to cold draughts of air whilst the body is very warm. In all my cases of acute primary pneumonia, I was able to trace their origin to a chill. There are two theories advanced as to the nature or origin of croupous pneumonia.

1. That pneumonia is a "specific" fever, of which the disease in the lung is only a local effect.

2. That it is a purely local disease, of which the pyrexial and other phenomena observed are only the immediate consequences.

From the following facts, the second hypothesis can scarcely be maintained : Experiments with the inhalation of hot air, moist warm air, icy-cold air, vapors of various noxious acids and gases, the tracheal injection of caustic ammonia and mercury, and traumatism, have all failed to produce croupous, but have caused catarrhal, pneumonia, The symptoms of croupous pneumonia seem to be opposed to its being a local disorder. I have seen cases where a very small portion of lung from physical signs would appear to be affected, attended with severe constitutional disturbance, as delirium, and a temperature as high as 106°.

In local inflammations, there is a direct ratio between the amount of surface involved and the constitutional disturbance which attends the same. The arguments in favor of the first hypothesis are the comparative rarity of ascertainable causes for its origin and the suddenness of the crisis while the inflammation is at its height. According to Dr. Loomis, in his article on pneumonia, the points of resemblance between croupous pneumonia and the acute general diseases are the following:

"It has an initiatory chill, an orderly pyrexia, and a somewhat typical course, inasmuch as in many cases there is a day of abrupt crisis and a definite duration. The countenance resembles that of typhus and typhoid fever, very frequently there are herpetic eruptions, and the kidneys are more frequently affected than can be considered as accidental. The head symptoms very much resemble the condition that accompanies the exanthems. It appears at times like an epidemic. Last spring, I had no fewer than seven cases under observation at the same time, two in the one house, brother and sister." Dr. Loomis also states in the same article that the resemblance of pneumonia to the acute general diseases is to be found, for the most part, in its nervous phenomena, and that the complications which render pneumonia dangerous are those which interfere directly with the muscular power of the heart or diminish its nerve supply.

Dr. Wilson Fox says the most probable hypothesis to explain the origin of pneumonia is that of altered composition of, or the existence of some morbid material in, the blood.

Sturges places pneumonia in a middle place between the specific fevers, so-called, and the local inflammations, and adds that it has something in common with both.

The late Dr. Austin Flint of New York was of the opinion that it is essentially a fever, of which the pneumonia is the anatomical characteristic. "Pneumonic fever is as appropriate as the term enteric applied to typhoid fever."

From the collective investigation report upon pneumonia, as given by the *British Medical Journal* for December 13th, 1884, the abstract is, to a certain extent, in favor of the opinion that pneumonia is a disease of a peculiar nature, including other elements than simple inflammation of the lungs.

The treatment of pneumonia has given rise to more earnest discussions, probably, than almost any other subject in modern medicine. It has been made a very battle-ground between the advocates of "heroic" measures, on the one side, and the supporters of a "rational" and expectant treatment on the other. A little common sense brought to bear on the subject will assist very much in removing the difficulty. No special plan of treatment can be adopted in pneumonia, so great are the differences in constitution that no two examples will admit of precisely the same method of treatment. The true course, I think, has been indicated by Hufeland—namely, to generalize the disease and individualize the patient. Thus, one group of cases will demand an antiphlogistic course of treatment, a second stimulation and support, whilst a third will be most benefited by little or no treatment beyond a well regulated diet and rest. At one time large bleedings were practised, regardless of the age, constitution or stage of the disease. Dr. Hughes-Bennett of Edinburgh and Dr. Todd showed that the treatment by bleeding is not only injurious, but unnecessary in a large proportion of cases. I might say the same conclusions are generally adopted by the profession at the present day. Antimony is another remedy that was very much used at one time in the treatment of pneumonia. That it is a remedy of undoubted value when given in suitable cases for the purpose of reducing the pulse and breathing, and in many cases checking the inflammation, I have had many opportunities of testing its efficacy. It should never be administered in adynamic cases, neither in the pneumonia of the aged nor in most cases of children. Veratrum viride and aconite are arterial sedatives of much value in pneumonia when given in appropriate cases. The alkaline diaphoretic salines are also valuable remedies to promote secretion and to keep the mucous and cutaneous surfaces at work. Calomel was at one time very much in vogue in the treatment of pneumonia, but it is now almost discarded.

In the *American Medical Digest* for April, 1886, Bartlett, and Moritz of St. Petersburg, speak in very high terms of the use of inunctions of mercurial ointment in the treatment of croupous pneumonia. They say no matter whether the metal is supposed to reduce the excess of fibrin, diminish congestion of the lungs, and favor the resorption of the inflammatory exudate, or whether we mean to kill by its action the specific etiological factors of the disease, "Friedlander's pathogenetic microbes," the mercurial treatment is usually attended with good results. They say that for the last two years this has been the only medication employed in croupous pneumonia, and the mortality has been reduced by it from 31.4 per cent. to 6.2 per cent., which is certainly remarkable. Alongside these inunctions, the only thing used was the cold compress to the thorax and quinine and digitalis, according to the indications of the case.

Blistering, once so fashionable, should never be used in the early stages of the disease, neither in the latter stages if resolution is progressing favorably. They may, however, be sometimes used with advantage in the latter stages in cases of delayed resolution. That blood-letting is a very beneficial and appropriate remedy in some cases, I think, cannot be gainsaid; for instance, should we be called to see a young, robust patient of previously temperate habits, threatened with a severe attack of pneumonia, pulse full and rapid, temperature high, great dyspnœa, with sudden engorgement of the right side of the heart, and, if seen in the congestive stage, the proper thing to do is to bleed at once. This is done not so much for its curative powers, as for the purpose of giving immediate relief until the proper remedies administered will have time to take effect. Under these circumstances also, if the fever be high, tartar emetic may be given, combined with salines and small doses of paregoric if the cough is troublesome. The affected side should be enveloped in a warm linseed-meal poultice, over which a little oil may be smeared. I am also in the habit of adding a little mustard to each poultice, and thus they do not require to be changed more frequently than every five or six hours. As soon as the sputa become free and catarrhal, I stop the tartar emetic and give liquor ammoniæ acetatis with spirits of nitrous æther and paregoric and sometimes digitalis. To remove pain and procure rest, especially at night, I give opium, but in the event of its being contraindicated, I give bromide of potassium in combination with chloral hydrate to produce sleep. In some cases I have used tr. aconite in combination with liquor ammoniæ acetatis, with very beneficial results. The above treatment applies to sthenic cases. Now, supposing we are called to attend an asthenic case in a feeble, broken-down constitution, we must adopt a stimulating plan of treatment. Opium is very serviceable in these cases, as in all cases of pneumonia in the early stages of the disease, fulfilling two purposes, namely, procuring rest and soothing the nervous system, which effects, if produced, render the system more tolerant of the disease, and the danger from exhaustion is diminished. Opium must not be given if there is cyanosis or much bronchial secretion ; which condition, if present, ammonia, senega and digitalis ought to be administered. In this class, wine is necessary from the outset, and whiskey or brandy freely given is the only thing which will carry the patient over the crisis. Quinine can be given with advantage in these cases.

I am firmly convinced that a certain proportion of cases in pneumonia will recover without treatment. I have at times been told by young men that they have had a slight cold with cough, pain in the side, and spat up a little blood ; when asked if they had done anything for it, would reply, done nothing, except remain in the house for few days—perhaps take a dose of physic, and not even that always. There are certain indications to be fulfilled in all cases of pneumonia. The bowels should be well attended to ; the patient should be kept in bed and as quiet as possible, in a large, airy, well-ventilated room, and its temperature should range between 60° and 70°. The diet is an important item in the treatment of pneumonia. The food ought to be fluid or semi-fluid, and should consist of a plentiful supply of eggs, milk, broth and beef-tea. In all severe cases, there are two sources of danger—namely, heart failure and pyrexia, more especially the former. There is no doubt but that a large proportion of deaths are caused from heart failure, and as the pulse is the true index as to the strength of the heart, therefore it should be most carefully watched in all cases of pneumonia, and if at any time we find it becoming very rapid and feeble, and especially dichrotous, alcoholic stimuli should be administered, as it is the best means we possess of sustaining the flagging heart. Ammonia, camphor, musk and digitalis may also be used, but they are inferior to alcohol.

The second indication is to lower the temperature, which may be done by cold compresses to the chest. I have had no experience myself with this form of treatment in this disease, and the profession seem divided as to its merits. I would not, however, think it suitable in the old or feeble, or in cases of organic heart disease, as it might produce too great a shock to the system, and the pneumonia, it is said, is more liable to extend from its use. Quinine is another remedy which is highly recommended for reducing excessive heat, but it must be given in large doses. During convalescence, the general strength should be maintained as much as possible by tonics and restoratives, such as quinine, iron, mineral acids, and strychnia. Cod-liver oil and change of air are also very beneficial in some cases. The different complications should receive their appropriate treatment.

TWO CASES OF PLACENTA PRÆVIA TREATED WITH TAMPONING AND TURNING.

By J. CAMPBELL, M.D.C.M. (McGill Univ.), L.R.C.P. (Edin.),
Seaforth, Ont.

Read before the Ontario Medical Association, June 3rd, 1886.

Case I.—Was called hastily on the morning of the 19th of January, 1876, to see Mrs. H., aged 32, the mother of three children. Found her in a pool of blood, pale and excited, with pulse 120, temperature normal. Hemorrhage had been sudden and profuse, but had stopped before I reached the house. She gave me the following history: Two weeks previous she had a sudden gush of blood from the vagina, which greatly alarmed her, as she had not reached her seventh month. A physician had been called in, and had given her some medicine to quiet her, but had not told her husband or herself what the matter was. On the present occasion there was a repetition of the same symptoms in an aggravated form. Made an examination and found the os but very slightly dilated; could with difficulty pass the index finger. It was also somewhat rigid and undilatable. The internal os was nearly the size of a quarter dollar, and I could detect a cushion-like body, above which was the head that could be felt by palpation above the pubis. No blood was escaping. Gave an opiate, and told her to rest in bed and take cool drinks. Fœtal heart could not be detected, and she had not felt the motions of the child for several days. Told her husband that there were breakers ahead, and when flooding returned he must call a medical man immediately. He told me that he wanted me to attend to her. Said I would consult my partner, Dr. Burgess, and agree upon our future course. We resolved to temporize for the present and act energetically when next flooding took place. Saw her the same evening; everything quiet, with no return of the hemorrhage. Got a sudden call on the 24th, and with Dr. Burgess hastened to the house. Found her blanched from loss of blood and on the verge of syncope. On this account we made no efforts to dilate the os and complete the delivery. The os was dilated to the size of a fifty cent piece and dilatable, and the placenta could be distinctly felt presenting at the internal os and attached all round it. Through the placenta a firm, round body could be felt pressing down. Labor had evidently set in. We tamponed the vagina carefully, and gave ergot and brandy. The flooding was arrested. The labor went on. At the expiration of two hours we removed the tampon, and found the os dilated fully two inches in diameter and dilatable. The cervix was soft, and a spongy body was dipping down into the cervical canal. Some blood had escaped in spite of the tampon, and as sudden gushes were now taking place in the intervals between each pain, we resolved to turn and deliver at once. Dr. B. gave some ergot and brandy, and prepared to control the uterus. Preparing my right hand on account of having more command of it, I passed it up to the os, which I entered, and detaching the placenta on left side of the patient, passed the hand between it and the uterine wall until I reached the membranes, which I ruptured. Found a leg without difficulty, turned, and delivered, Dr. Burgess pressing firmly on the uterus all the time. I then passed the hand into the uterus and delivered the placenta. We both remained with the woman for nearly three hours, giving, at intervals, ergot, stimulants, and liquid nourishment. The child had been dead some time. A mild form of septicæmia set in, with moderate elevation of temperature, which yielded to the proper treatment. The patient was under our care for eight days in all. She made a good recovery.

CASE II.—Received a summons at 1 A.M. on the 1st of Aug., 1881, to go with all speed to see 'Mrs. C., aged 30, pregnant for the fourth time. Found that she had been taken with sudden flooding, which greatly alarmed her. Was about her seventh month. Upon examination, satisfied myself that the head was presenting, but found the os undilated and the cervix rigid. Plugged the vagina, gave brandy and opium, and remained with her three hours, when I renewed the tampon, and left, the hemorrhage having entirely ceased. In four hours removed the plug and ordered absolute rest in bed, with cold acidulated drinks.

Aug. 2nd.—Visited her to-day, morning and evening. No return of flooding. Patient recovering her strength. Warned her husband that there was danger ahead, and that he must call medical aid immediately when hemorrhage returned, as undoubtedly it would. Expected that he would call the late Dr. Vercoe, the family physician, as I had merely been called in his absence.

Aug. 3rd, 1 A.M.—Was again called in haste, the flooding having returned. Found the patient weak and pale, and the bed saturated with blood. Examined, and found the os dilating and the woman in labor, but every pain pumping blood. There was complete placenta prævia. Sent the husband for Dr. Vercoe, while I proceeded to employ the tampon as before, at the same time giving ergot and brandy. The doctor arrived in due time, and we watched the case as the labor went on. We removed the plug and made a hasty examination at the end of two hours. Finding the os sufficiently dilated and dilatable, and hemorrhage now worse than ever, we agreed to turn and deliver. A good dose of ergot and brandy having been given, Dr. Vercoe proceeded to compress the uterus, while I prepared my right hand for the operation, as in the case already reported. We succeeded nicely, detaching the placenta on the left side and reaching the membranes above, rupturing the same, seizing a foot, and turning without much difficulty. When the leg was brought down, the hemorrhage stopped. Using steady traction, however, we delivered, my assistant following down and compressing the womb in good style. The after-birth was afterwards removed without trouble. We both remained nearly three hours with our patient, using stimulants and liquid nourishment, with occasional doses of ergot. We kept up compression on the uterus for a full hour. Saw her twice next day, after which I handed her over to the care of Dr. Vercoe, who attended her through a mild attack of puerperal fever. She made a good recovery, and has borne children since.

Remarks.—It is not with the intention of throwing any light upon this particular subject that I present these reports, but for the purpose of provoking discussion and getting valuable suggestions from experienced obstetricians who may be present. In these cases, nature makes a grand mistake—worse than a mistake—she commits a blunder—and we ought to be prepared to be prepared to remedy her mistakes and correct her blunders. In peace, we ought to be prepared for war, as we know not how soon hostilities may begin. In looking back upon our treatment of those cases, I would say that we temporized too much in both. Such conduct might have been fatal. Our reasons are the following: 1st, The treatment of such cases has changed for the better since 1876 and even since 1881. 2nd, Both cases occurred in the families of other medical men, who, I thought, would be called subsequently to treat them when the critical moment had arrived. However, "all's well that ends well." Both mothers were saved. As for the children, they were dead long before our operations began. Those trying cases have taught me a lesson, and ever since, this subject has had peculiar interest for me; hence I have endeavored to keep abreast of the times. By way of conclusion, we cannot do better than summarize the advanced treatment of the present day. The following would be my treatment of such cases :—

1. After the first pronounced hemorrhage, we would induce premature labor ; next flooding might be fatal. We should have a clear idea of what is required in a case of this kind. (*a*) We must have expansion of the cervix, and the cervix cannot expand without detachment of the placenta ; hence we have hemorrhage which will require treatment and careful watching. The method of dilatation which will shorten labor at the same time will be the best—such as sponge tents and Barnes' bags. When called to such a case, we ought, mentally, to ask ourselves the following questions : Has labor begun or has it to be brought on ? Have we placenta prævia complete or not ? Are the pains good or not ? Are the membranes ruptured or not ? What about the length and dilatability of the cervix ? If cervix long, narrow and rigid, and membranes entire, we could insert a sponge-tent and keep it in place with a tampon. The plug will strengthen the pains and compress the uterine vessels, producing coagulation of the blood. If symptoms were not urgent, we would dilate completely ; if they were urgent, we could deliver, if the external os was the size of a fifty-cent piece, as by that time the internal os would be completely dilated.

2. If the cervix was prepared, I would rupture the membranes. If the placenta had a lateral or marginal attachment, the pains strong and regular, the pelvis normal, the head presenting, and no serious flooding, we would leave the rest to nature—merely fixing the head by using compression from above, giving ergot occasionally, and having the forceps ready to use if required. If patient was anæmic, the head moveable, and hemorrhage persistent, version and rapid delivery would undoubtedly be the course to pursue. When there is complete attachment, we must not be content with half-way measures, though it is often necessary to use the tampon on account of the length and rigidity of the os, by way of preparing the parts for the final operation. Where it can be accomplished, turning by the bi-polar method should always be the one adopted. If it fails, the hand can be pushed boldly on, and the old system

used. The method of partial separation of the placenta, as recommended by Barnes, should always be adopted when the cervical tissues are softened and when dilatation has begun. By this means we remove an obstacle to the expansion of the cervix, for the adherent placenta acts as an impediment to this process. The effect usually is that retraction of the cervix takes place and hemorrhage ceases. After this would follow Barnes' dilators to expand cervix rapidly, and version by the bi-polar method and extraction. Pressure on the uterus should be kept up for some time, and ergot given for days, as post-partum hemorrhage is apt to occur. If there was a constant draining after the measures mentioned had been used, a speculum could be passed and the bleeding points swabbed with cotton soaked in a styptic preparation of iron. The utmost cleanliness should afterwards be used with disinfectant vaginal or uterine douches, as the lochia flowing over the placental site is apt to produce septicæmia, which occurred in both my cases.

THE RELATION OF MICRO-ORGANISMS TO THE PUERPERA AND THE WAY TO MANAGE THEM.

By T. JOHNSON ALLOWAY, M.D.,
Gynæcologist to the Montreal Dispensary.

(*Read by title before the Canadian Medical Association, at Chatham, September*, 1885.)

[Continued from April No., page 531.]

The part of the post-partum treatment of these patients which treats of the prevention of septic phenomena is found in the history of antiseptics generally as applied to general surgery. Our endeavor should be to inhibit the function of germs, and in this way obtain a total extinction of the disease in question. To say that we possess, according to our present knowledge, germicides applicable to such cases is untrue.* Antiseptic measures we can institute and carry out. Germs we will have settling in and infesting parturient wounds, no matter under what circumstances or how careful we are in endeavoring to exclude them. Ogston proved that nine hours after delivery the lochial discharge contained putrefactive organisms in abundance. This fact I have proved to my own satisfaction in *every* case, the discharges of which I have examined. It only requires the necessary time for these organisms, present from the beginning, to bring about definite vital phenomena, characterized by the change of proteids into soluble peptones, and these into leucin and tyrosin: these, in their turn, into very low compounds, which ultimately yield certain alkaloids having toxic effects when absorbed into the blood. And it is interesting to know that these very changes are brought about by *abstraction* of materials which are necessary for the growth and multiplication of these organisms. We constantly hear of the all-soothing and healing properties of this perfectly harmless fluid, which nature in her great wisdom gave woman as a sort of Balm of Gilead in their function of race-production; that it is, we are told, a crime to wash it away or interfere with it in any way whatsoever; that such a course of treatment is in direct contravention of the laws of nature, and that woman in her wild state requires no such refinement of treatment in labors. But it is here forgotten that woman in her wild state is not surrounded by the conditions, too numerous to mention, which her sister of the unhealthy and crowded city is, and that it is not true that they are altogether exempt from puerperal fever. Dr. Engelmann has long since proved this, and I myself have been informed by a trustworthy missionary's wife, many years a resident with the Oka Indians of Canada, that the septic micrococcus runs a high and mighty career amongst the lying-in squaws of that settlement, occasionally sweeping many of them away in the form of an epidemic. As regard the harmlessness of the so-called healthy lochial fluid when at rest in the passages in contact with necrosed tissue, from what we have learned we can only regard it as a veritable culture fluid of a fairly complex nature; that the passages in which this fluid rests form an excellent incubator, and that the necessary physical properties for the incubation and growth of bacterial life—heat, moisture and rest—are all here and constant. To me there is but one conclusion to be arrived at—namely, that we must break up these conditions, and by changing that of *rest* into one of motion or running stream, we render the resident organisms harmless. Upon this principal is based the whole value of the so-called antiseptic irrigation, and in my experience it matters very little, in uncomplicated cases, whether we use as a prophylactic powerful antiseptics or boiled water. And that it is not necessary to use irrigation to flush the bacterial stream more often than once every twenty-four hours in simple cases, and every twelve hours in more serious cases. The reason for this is obvious. The organisms cannot make a start at growth in their incubator under several hours of undisturbed existence, and consequently no poison is generated in sufficient quantity to produce a general systemic effect.

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* *Vide* Klein, Micro-organisms and Disease, page 188. Cheyne, Antiseptic Treatment of Wounds, page 25.

For the past five years I have most strictly followed out the plan of antiseptic irrigation in *every case of parturition.* I have obtained, as is well known, the most gratifying results to my patients and comfort to myself. I have also had some amusement in carrying out the treatment in the presence of those women who have nursed patients for a quarter of a century, and felt quite disturbed at innovations of this kind.

I remember attending a young married lady in her first confinement. About the sixth or seventh day she said to me, "Doctor, when I left home my mother told me, if I should ever be ill in this way, not to be alarmed if on the third day I would feel very sick, have a bad headache, and feel feverish ; it would be the 'Weid,' and quite natural."

I remember a case which bears somewhat upon *septic* midwifery, which was interesting to me at the time. The patient was about 30 years of age, in her third confinement. I ordered an irrigator as usual, but through some neglect on the part of the nurse (I think intentional), it was always being forgotten. On the morning of the fourth day I was sent for hurriedly. I found this patient suffering from intense headache, high temperature, and some pain in the pelvis. On close examination, I found a small laceration, just within the posterior commissure of the vulva, granulating. My finger went directly downwards into a pouch full of very fœtid discharge. The infective material in this case may possibly have been absorbed from the vulvar tear. It might also have been taken up by the slightly lacerated cervix. Here was a case where the vagina was converted into a most excellent incubator, and it only wanted the necessary time for the organisms of putrefaction present to establish the chemical changes before alluded to.

Another case of an interesting nature was a young married lady in her first confinement. The husband had confided to me the fact that he was suffering from an attack of gonorrhœa, and that he felt sure he had conveyed the disease to his wife. I used all precautions before the confinement. After the birth, the irrigator was used twice daily up to the tenth day, and thinking all was right, as far as the probability of specific infection was concerned, I omitted it from this date. All went well until the fifteenth day, when she was seized with violent chills, high fever, intense headache, and severe pain in pelvic region. Uterus was irrigated morning and evening with sublimate solution, etc. On the twentieth day the symptoms abated. Here was a case where the specific gonorrhœal poison was being washed away, and the action of the micro-organisms inhibited for ten days. The discharge was then left with the coccus; it began to develop, and produced the poison in sufficient quantity and virulence to induce, in four days, a violent toxæmia.

About a year ago I was asked to see in consultation a young French primipara, who had been confined some six or seven days previously. I found her intensely septicæmic. The air of the room was very fœtid, discharge extremely so, and matters generally in a bad state. I noticed, also, that the husband of this patient had his hand in a sling, as if wounded. On nearing him I got a distinct odor of iodoform. The physician in charge said this man had sustained a severe injury requiring amputation of two of his fingers; that he had dressed the wounds antiseptically, and that the injured parts were nearly well. This was an excellent illustration of the strange views held in regard to the treatment of puerperal wounds. If a man gets his fingers injured, the wounds are carefully washed from all foreign particles, edges nicely brought together with sutures and iodoform and other antiseptic dressings carefully applied.

The wounds are re-dressed every day or so until recovery takes place. When, however, an unfortunate young wife suffers much more severe injury to her genital tract, the student is told on no account to touch those parts, they are sacred, nature will do everything; should she fail, however, he is told to do *then* what he should have done at the outset under the principles of *prophylaxis.* In fact, to pursue the very course the well-cultured surgeon had taught him in the case of the injured husband. I cannot refrain here from commenting upon the inconsistency of these expectant physicians. They recommend for the *cure* of the disease that which they strongly denounced for its *prevention.*

We will now pass on to the subject of antiseptics, and I will only consider those which are applicable to the cases we have under consideration. In using the terms *antiseptic* and *germicide* we must be definite and clear upon the correctness of their application. As used at present in current literature, their signification is somewhat misapplied. Their application would lead us to suppose that in them we had substances which would kill *outright* bacteric organisms, and that we need no longer fear germinal activity on the part of these organisms. To be brief, we have no such substonce. Klein has shown us some very interesting experimental results. By exposing micro-organisms in nourishing media at proper temperatures, and adding carbolic acid or corrosive sublimate in very strong solution, he found that their growth was retarded or altogether inhibited, but on removing these organisms, and placing them in fresh nourishing media, they grew and multiplied as if nothing had happened to them. And, further, if the spores of anthrax, treated in this way, are inoculated into guineapigs, the animals die of typical anthrax. But be it understood that, although the spores [of the bacilli remain unaffected by such powerful agents, the bacilli are killed, this being the cause in all probability of the inhibition of their vital functions while in the antiseptic medium. Of all the antiseptics with which Koch experimented, he found the bichloride of mercury the most effectual; 1 in 600,000 parts is capable of impeding, and 1 in 300,000 of completely checking the germination of spores. These spores can withstand, *uninjured*, the effects of boiling water for a few minutes; it, however, destroys them outright in a short time. Let us now consider in detail the characteristics of a few of the favored so-called antiseptics, or, more properly speaking, micro-bacterial inhibitors, and the technique of their application.

Carbolic Acid.—Notwithstanding that carbolic acid has its advocates, and that the most respected of surgeons, Dr. James B. Hunter of New York, declares it to be superior, or equal, to the mercuric perchloride, I think the majority of surgeons have not found it by any means satisfactory. As a proof of this, we find them using carbolic acid wherever instruments are in danger of being injured by the bichloride, but directly the instruments are no longer required, the carbolic acid is put aside and the bichloride substituted. I have found that carbolic acid solution in obstetric cases requires frequent repetition of application to obtain that action which insures safety. If we use five per cent. solution frequently, it is likely to abrade the tissues, and that in very weak solutions it has no material effect whatever over boiled water. On account of the necessity for its frequent repetition, it is doubtful whether the unavoidable disturbance of the patient does not counterbalance in injury the good intended to be obtained by its use. Also, it is left in care of nurses, which has many times resulted in very disastrous consequences. I have therefore given up its use entirely in obstetric cases for some years past.

Iodoform—Is not generally used as a prophylactic in obstetric cases. It does not, in small quantities, seem to have a very powerful effect in inhibiting the vital phenomena of micro-organisms. I have seen them, notably the bacterium termo, quite active in a well-impregnated solution of beef on the third day, the odor of the iodoform, however, covering up that of putrid decomposition. Binz found that iodoform retarded the migration of leucocytes through the vessel walls. Its odor is peculiar, and has made it in the majority of cases objectionable to the lying-in patient. As a slight digression from the subject I might say here that I have used iodoform in the form of suppositories in cases of puerperal metritis. These suppositories (gr. x each combined with boric acid) are introduced into the enlarged and œdematous uterus after each irrigation night and morning, and the cavity was in this way rendered aseptic until the affection had subsided. Its undoubted service in these cases is now, I may say, universally acknowledged, and to such I think its application in obstetrics will be limited.

Boracic Acid is a good antiseptic in obstetric cases after the sublimate solution has been discontinued. It is non-poisonous and non-irritating. A large teaspoonful of the powder dissolved in a quart of hot water can be used as an irrigation once or twice daily, beginning on the eighth or tenth day and continued for a period of two or three weeks. It removes any purulent discharge which may have collected in the vagina at this period of convalescence, and aids involution of the vaginal walls and cervical glands, the latter of which are so enormously enlarged during pregnancy. Boracic acid is also a much better antiseptic than it usually gets credit for. I have at present a beef infusion treated to saturation with boracic acid one month ago, and it is still perfectly sweet and free from micro-organisms.

Naphthalin is not suitable for obstetric purposes, chiefly on account of its insolubility in water. Placed in beef infusion, it does not prevent the development of micro-organisms and putrefaction taking place longer than eight days.

Eucalyptus Oil is a very good antiseptic. Bucholtz found it to be three times as powerful as carbolic acid in this respect.

Bichloride of Mercury is the most recent and effectual inhibitor of bacterial growth. A solution of this salt so dilute as 1 in 300,000 will render the spores absolutely incapable of germinating, and will, of course, kill the organisms outright. This result is, however, not confined to mercuric solutions, as the presence of carbolic acid, phenol, thymol, salicylic acid, and even weak vinegar, if in sufficient quantity, will prevent the spores germinating in any nourishing medium. But apart from this, it is believed that the bichloride solutions has a specific action on the injured and swollen tissues which no other so-called antiseptic has in the same degree. I have seen most extensive swelling of the walls of the vagina and vulva resulting from prolonged forceps operations disappear, under irrigation night and morning of a very hot bichloride solution, in 36 hours. Pain and tenderness also disappear, leaving no further necessity for the use of the catheter. In just such cases I have experienced disappointment during the use of carbolic acid, Condy's fluid, and such like solutions, in being compelled to resort to the use of the catheter for several days. Regarding this antiphlogistic property of the bichloride, it is somewhat difficult to give a definite opinion upon. Ogston however, has shown that acute inflammation may be produced by micro-organisms. If corrosive sublimate is here capable of destroying more effectually than any other agent these resident micro-organisms, we can understand this certainly very valuable clinical fact. It is not due to astringency, as no other mineral astringent will act in the same prompt way. A very remarkable relation obtains between vaginal irrigation with the bichloride solution and the non-occurrence of acute suppurative mastitis. Ogston has drawn our attention to the occurrrence of mammary abscess at a puerperal period, which coincides with the lowered vitality observed in unduly stimulated and congested mammæ and fœtid poisonous lochia. That cocci obtain an entrance into the circulation in some protected condition, and though powerless to effect a lodgment in stronger organs, they become welcome guests and colonize in the weakened and congested breasts. Be this as it may, I have not seen, in a single instance, a mammary abscess occur in practice since I began the mercuric irrigation ; and it was certainly not an uncommon occurrence to me when treating these cases upon the expectant plan.

Kuestner (Jena) found that after carbolic irrigations of the uterus, the prompt disappearance of the cocci could *not* be demonstrated, but they vanished very promptly after the sublimate irrigation.

Frænkel (Breslau) found that during very extensive experimental investigation with all known germicides, the cocci disappeared from the uterine secretions most rapidly under the sublimate treatment.

Hegar (Freiburg) uses the sublimate irrigation, and has found it the most satisfactory of all germicides at the Freiburg Clinic.

Kehrer (Heidelberg) believes that in the puerperium the sublimate is indispensable. Only one-third of all parturients under his care with the sublimate solution showed any signs of fever, while before its introduction two-thirds of cases exhibited severe fever.

Paul Bar's remarkable statistics of mortality in the Paris Maternities before and after the introduction of antiseptics is simply marvellous. In fact, they speak so emphatically in favor of antiseptics that even the most obdurate of expectantists will not in future have a leg to stand on.

Auvard (Paris), speaking of corrosive sublimate says: " It is still the antiseptic to which preference is accorded in the various obstetrical services of Paris. Its trifling cost, its powerful and certain action, and its almost entire harmlessness, gives it supremacy over all other antiseptics in use at present."

At a recent meeting of the Obstetrical Society of London, Dr. Mathews Duncan said that the subject of antiseptics was the greatest in the obstetric department, but it received very little attention. It was more important than the prevention of epidemics, for they only came occasionally, while puerperal deaths continually occurred. In the history of the subject, he said all measures had failed to reduce mortality until antiseptics were introduced. Dr. John Williams said: Taking the deaths in childbed at one per cent., the lowest mortality after the destruction of puerperal fever would be a quarter of one per cent. The object should be to reduce the mortality to this level, and he believed it might be attained by antiseptics. He and Dr. Champneys had used in the General Lying-in Hospital in succession carbolic acid, Condy's fluid, and corrosive sublimate as antiseptic agents. Since the last named had been employed there had been *no deaths* from puerperal fever, and scarcely any illness.

Closely connected with this subject is Dr. Max Schede's contribution to the literature of antiseptics in surgery and obstetrics generally. (*Volkmann's Klinische Vorträge*, No. 251.) Previous to the time of Listerism by Schede's predecessor, the number of septic accidents and cases of erysipelas was very large. Under Listerism a marked improvement took place, but it did not accomplish enough to satisfy the new director. He first began a systematic attempt to organize a surgical service, and to teach all the attendants the need of absolute cleanliness and asepsis. Coming to Hamburg at the time of the iodoform era in surgery, Schede at once introduced the iodoform treatment in all its details, but he was much disappointed in its results. Although he had some brilliant successes, the iodoform treatment often failed to prevent septic complications, while erysipelas increased in the wards very rapidly. Schede does not say that iodoform causes erysipelas, but he is decidedly of opinion that it does not prevent it. The iodoform was therefore abandoned as a failure, and the corrosive sublimate was introduced in its stead. The results obtained, during now three years, have been most brilliant and satisfactory, and Schede comes forward as an enthusiastic advocate of the sublimate treatment of wounds. The technique of his method is briefly as follows: He has two sublimate solutions, one of the strength of 1–1000 and the other 1–5000. The first is used to disinfect hands, skin of patient, sponges, drainage-tubes, and all wounds which are to be closed (in obstetrics, lacerated perineum). The second is used for irrigating large wounds. The materials used for dressing are sand, glass wool, sublimate gauze, sublimate wadding, and sublimate catgut. Sublimate wadding and gauze are prepared by soaking in a solution of the strength of 1–190, with 10 parts of glycerine. They are wrung out and allowed to dry. The glass wool, of which Schede speaks in the highest terms, is prepared by soaking it in a one per cent. solution of sublimate. Wounds are covered with this prepared glass-wool, then with similarly prepared peat pads, and firmly compressed with gauze bandages. Schede thus concludes: 1st, The sublimate solutions are more efficacious and less dangerous than five per cent. carbolic acid solutions. 2nd, In severe wound infection, diphtheria, and gangrene, the sublimate solution can be used as strong as one per cent. with perfect safety.

Schede also discusses the dangers from sublimate absorption. He refers to the report of Fränkel, who found diphtheritic entero-colitis post-mortem in a number of cases, and attributed it to the mercury. To offset this, Schede reports four cases in which the same lesions were found after death, but in which the sublimate had not been used at all. He concludes that the diarrhœa and enteritis may be caused by sepsis. His cases certainly take away some of the force of Fränkel's observations. He believes that with proper precautions the sublimate wound-treatment is safer than any other.

In connection with the subject of the dangers of sublimate solutions in obstetric practice, it may be stated that Auvard, in *l' Union Medicale*, refers to two fatal cases from the intra-uterine use of sublimate solution. Hofmeier also refers to two cases of sublimate poisoning, one of which was fatal ; and similar cases have been reported by Stadfeldt and Winter (*N. Y. Med. Rec.*, March 14th, 1885, pp. 291-2). One of the conclusions drawn by Auvard is, that the condition of the kidneys is a most important one to bear in mind, as a nephritis renders the patient more susceptible to the toxic effects of mercury.

It would be a very easy matter to continue producing clinical evidence of the value of the bichloride in the prophylactic treatment of the puerpera, but, at the same time, we must also look to what is said of it on the dark side. It is well known to be a powerful poison—first, in its therapeutic use as a lotion, and second, in its accidental administration by the mouth. It has, however, been evident to me that its ill effects, when used in no matter what way, have been brought about through want of care and the proper knowledge of the *technique* in its application. When these have been carefully observed I cannot but look upon the drug as a perfectly safe one, and from a varied experience in its use, I think I always shall. For instance, it is very horrifying to read of Stadtfeldt's case, where some one had injected a post-partum uterus with a bichloridic solution (1–1500) four hundred cubic centimetres in quantity. Suddenly, collapse set in, followed by diarrhœa, bloody stools and death in ten days. An instructive accident of this nature occurred to myself when giving a vaginal injection several days after an accouchement. The tube, an ordinary glass one, attached to a fountain irrigator, passed up through a large patulous cervix into the uterus. She complained of the fluid passing higher than usual into the abdomen, and before I could recognize what had occurred, she turned pale and passed into a very violent rigor and state of collapse. I withdrew the tube and rapidly passed two fingers into the uterus, and with the aid of my right hand over the uterus outside, allowed the fluid, to the quantity of over half a pint, to gush out into the vagina between my fingers. I satisfied myself that the uterus was completely emptied, and then gave her a hypodermic injection of ergot. This patient was a little restless the following night from disturbance of her circulation, but was quite well next morning, and continued to be so afterwards as if nothing had happened. The collapse here was simply shock produced by sudden over-distension of the uterus by a fluid, and had I allowed that fluid to have remained there, which, without interference it certainly would have done, I would have had a subject for an essay upon the death-dealing effects of the sublimate solution in obstetric practice. This accident was, of course, due to unpardonable careless on my part, and does not bear upon the general merits of the principal.

The moral this lesson teaches is: Do not inject, even *intentionally*, a uterus with a tube which does not provide for a rapid return of the stream. An interesting paper on this subject will be found in the *Obstetric Gazette*, August 1884, page 413, by Dr. Palmer, urging the propriety of vaginal injections, used with care, in every puerpera. An essay of this nature would not be complete without alluding to Dr. Garrigues' well known method of treating puerperal cases. It is briefly as follows:—

The patient is at first given a bath, then an enema. Her abdomen, genitals, buttocks and thighs are carefully washed with a warm solution of the bichloride, 1–2000. The vagina is then irrigated by means of a fountain irrigator with the same solution, two quarts in quantity being used. In protracted cases, this irrigation is repeated every three hours. At the beginning of labor the physicians and nurses wash their hands, using nail brushes, in a solution of the same strength before touching the patient. No lubricant is used in ordinary cases. If necessary, glycerine with bichloride solution 1–2000 strength. As the head appears it is received in a piece of lint saturated in same solution, and the genitals are kept covered with a similar compress. The placenta is expressed by Credé's method and the vagina is washed out with the bichloride solution. Intra-uterine injections are only used when the hand or instruments have been introduced into the interior of the uterus, or in case of birth of a macerated fœtus. Dr. Garrigues never allows any of the placenta or membranes to remain in the womb. With careful antisepsis the introduction of the hand into the uterus is in no way compared with the danger of hemorrhage and septicæmia by leaving any part of the secundines behind. In this case a large (two to six quarts) sublimate injection, intra-uterine, is given just as hot as the hand can bear it. After the expulsion of the placenta, the patient is washed and *the dressing applied.* It is (1) a piece of lint three inches wide, and double, saturated with the bichloride solution, (2) outside of that a piece of oiled muslin nine by four inches (3) outside of that a large pad of oakum, and (4) the whole is fastened by means of a piece of muslin to the binder, with pins, in front and behind. This dressing is put on with the same care as a wound is dressed after a capital operation, and renewed *four* times in the twenty-four hours. At each removal the genitals are washed. No vaginal injections are used unless the discharges become fœtid. (This dressing need not be so complicated. A good-sized solid pad of sublimate jute made to fit well into the parts and secured to the binder in front and behind, makes a very effective antiseptic dressing.)

Dr. Garrigues has proved the bichloride to be much superior and more trustworthy than carbolic acid in such cases. His cases occurred in the University Hospital, New York, and it may have been not a difficult matter to carry out there under such able nursing. But even in Dr. G.'s hands, it has not prevented the lochia becoming offensive, which is evidence of putrefaction. And under such circumstances, I am strongly inclined to think that it was due more to the constant washing and changing of dressing that his patients did not become septic than to any particular virtue in this complicated dressing. I have given it a fair trial in private practice, and found that without irrigation the lochia invariably became fœtid just as without the dressing, and I therefore combine it with irrigation.

For several years I have, with the exception of one case related of septic fever, used vaginal irrigation of corrosive sublimate solution of strength varying from 1–2000 to 1–5000 once every morning at the usual visit. This was occasionally not begun until the second day after the delivery, and I think it is quite safe in private practice to begin irrigation at that time. I have also combined with the irrigation treatment that of applying after the injection a pad of antiseptic sublimated jute to the vulva and perineum, and pinning a strong napkin over this to the binder in front and behind. This pad is renewed night and morning only, and is chiefly intended to absorb discharge and support the perineum and pelvic floor generally. The patients have always expressed gratitude for the support experienced, and I am convinced of its benefit as a splint to the often much over-strained pelvic floor. This method has never allowed the discharge to become fœtid, as the vagina is flushed with a *very hot* irrigation of the sublimate solution every morning up to the eighth or tenth day, and then I generally advise the patient to have the nurse continue once every morning a very hot injection of a solution of boric acid with the view of aiding involution of the parts. This may be continued for any length of time up to a month. The benefit derived from this latter additional advice to the patients will be seen in the properly involuted vaginal walls, and every physician knows what that means.

As regards our antepartum procedure, my views are essentially the same as those of Dr. Garrigues and other careful observers. It is most unpardonable in the conduct of a physician to examine his patient before he has washed his hands and arms to the elbows in at least an additional relay of fresh water, using nail-brush freely, and afterwards bathed them in a solution of corrosive sublimate. This solution, in a pint bowl, he should carry with him from the washstand to some convenient place near the bed-side, and before each examination dip his hand freely in the solution. Should it become necessary, during after events, to introduce his hand into the cavity of the uterus, it may be done so with safety.

In conclusion I would say:

1. Post-partum vaginal irrigation as described with weak solutions of corrosive sublimate, is nothing more nor less than antiseptic treatment of wounds; and the surgeon who practises the latter on other, and refuses to do so on puerperal wounds, cannot endeavor to reconcile his action without appearing *inconsistent.*

2. That this method of treatment is the one most reliable, by which fœtid decomposition, and therefore micrococcus poisoning, can be prevented.

3. That the procedure is perfectly safe as regards mercurial poisoning, provided ordinary care is recognized by the physician himself, and that a nurse is never entrusted with the performance of the operation.*

4. That the water be as hot as can be borne, with the view of aiding involution, and that the antiseptic pad should be applied as described.

5. No solution should be used but that of the bichloride.

6. A perfectly new fountain irrigator should be used for each private patient; better none than a second-hand one, no matter how apparently perfect.

7. See that the irrigator is playing before introduction of nozzle, to prevent entrance of air.

8. It is well to remember that one drachm of the salt added to one ounce of spirit, gives for each teaspoonful in one pint of water, 1 part in 1000. From this solution one of any strength can be prepared.

9. In a case where a macerated fœtus has been born, the uterus should be irrigated with a sublimate solution (1–5000) once each day for from three to five days, according to circumstances. A macerated fœtus need not of necessity be in a state

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* In hospitals trained nurses under a house physician can be relied upon.

of putrid decomposition when expelled, but should it be so, it will be sure to infect the cervix as it passes through. Evidence of infection in such a case may not become manifest until the second, third or fourth day afterwards, when it would be too late to prevent serious damage, or perhaps to save life.

10. Napkins should not be placed against the vulva as a dressing, under any circumstances. The same napkins are often used at successive pregnancies throughout the whole child-bearing life of one woman, and may, for aught we know, have done service for neighbors as well. It is not difficult therefore to see what a serious source of infection they may constitute. A piece of unbleached cotton twenty-four inches long by six inches wide, or better, a similar sized piece of washed gauze, will fix the sublimated jute dressing firmly against the vulva and perineum by being pinned to the binder behind and in front.

11. Lubricants of any kind should not be used ; I do not know of any act more unnecessary at obstetric operations. The cervix at this period of pregnancy is at its height of glandular function, and secreting tenacious mucus in large quantities. I have seen a physician deliberately anoint his forceps and hands with stinking rancid lard and introduce them into the uterus. In cases where we have reason to suspect venereal disease of the patient we may use some clean unguent as a protection to the operator, but under no other circumstance.

12. Be sure before leaving your patient that the uterus contains no shreds of membrane adhering to the edge of placental site. I believe a neglect of this precaution is responsible for many of those cases of sepsis which puzzles us so much to account for, and which has been hitherto placed under the head of auto-infection. I regard the careful introduction of the PURELY ASEPTIC hand into the vagina, and of the fore and middle fingers into the uterus, for exploration after expulsion of the placenta, as a perfectly safe and justifiable procedure. And I am confident that as we gain in experience, we will come to admit on all sides the truth of this teaching. And the procedure will be proved to be much more harmless and rational than the introduction of unwashed fingers within the rima vulvæ of the puerpera for diagnostic purposes.

13. Lacerations of the perineum, even to a slight degree, should be repaired at once by the "single silk suture" method.

14. Never, under any circumstance, allow your sublimate solution to leave your hands, nor prescribe the salt in the form of powder, as recommended by Dr. Garrigues. As a neglect of these precautions, I will briefly relate two instructive cases, both of which show also the enormous doses of the salt which can be taken by mouth with impunity:

A physician prescribed quiniæ sulph. gr. xx to be taken in a spoonful of water; also hydrg. bichl. gr. vii to be dissolved in a quart of hot water and used as directed. There were several of these latter powders to be compounded and sent to the patient. The nurse, by some stupid error, gave one of the sublimate powders in the spoonful of water instead of the quinine. The patient shortly afterwards became violently ill, and continued vomiting and purging for some time, but eventually recovered without any apparent after ill effects. A notice of this case was published in one of our daily papers at the time, and I took some trouble to obtain a reliable history of the case, which satisfied me regarding its correctness. Shortly after the occurrence of the above case, I had occasion to irrigate a uterus after removing a decomposed decidua in a case of miscarriage. After making the required solution, I put the bottle down on a dark or shaded part of the table, and on leaving the house omitted to take it away with me. Next morning I had a message to say that my patient had taken some poisonous medicine by mistake and was dying. I found she had taken a large teaspoonful of the forgotten solution in some water, equal to about eight or ten grains of corrosive sublimate. (It was thought to have been some household remedy for neuralgic toothache.) The dose was taken at 10 o'clock the night previous, fifteen hours prior to my present visit. She had been vomiting nearly all night, and was now suffering most intense abdominal pain and purging violently. Pulse and temperature were, however, undisturbed. There was no history or appearance of collapse, simply an expression indicative of suffering. I at once administered a hypodermic of morphia, applied a sinapism, and after the pain had abated left her. On calling next morning, I found her, to my surprise, perfectly well, there being only slight tenderness on pressure over the hypogastrium. *Cavendo Tutus.*

Correspondence.

VIENNA, July 8th, 1886.

To the Editor of the CANADA MEDICAL & SURGICAL JOURNAL.

DEAR SIR,—There is probably no name in the field of surgery better or more favorably known than that of Professor Billroth. There are few Canadian medical men who have not enjoyed reading his written works, and I could wish that as many had enjoyed the privilege of hearing him and, above all, seeing his work in surgery. Professor Billroth is a man rather below the medium height, and of that portly build so becoming to elderly gentlemen of vigorous health; he has a long, white, patriarchal beard, with here and there a shine of the original blonde, thin gray hair combed back over a broad head, a steady, searching eye, and a manner instinct with energy, through which shines the genial influence of a true gentleman's manly spirit. His kindness to strangers and lack of self-assertion are very attractive and praiseworthy.

Those who charge Professor Billroth with recklessness in his surgical boldness would be struck by the following feature in his lectures. In describing an operation, or generally discussing an operative procedure, he is most minute and emphatic in speaking of the possible sources of failure surrounding the undertaking, and in specially fortifying his hearers against these possibilities. To this alertness and constantly meeting danger more than half way we may probably attribute his marvellous success.

The class of surgical procedures with which the name of Billroth is specially associated is that of operations upon the alimentary canal. He was the first surgeon to suggest the feasibility of excision of the pylorus, and the first to perform the operation successfully. My wish to see this operation performed by him was, through the kindness of himself and his courteous assistants, gratified on the 20th June of this year. The patient was haggard and exhausted by the practical starvation necessarily associated with serious pyloric stricture; in spite of all, she went through the operation well, but, although she was a few days ago smilingly enjoying a dainty dinner of fowl, it still remains a question whether nature's wasted powers can again fully establish nutritive activity.

On the 25th of May the professor removed from the ascending colon of a woman, about 45 years old, a tumor cancerous in nature, but fortunately confined to the bowel, and involving only a short portion of that. The operation necessitated the resection of about four or, perhaps, five inches of the above-mentioned viscus in its entire circumference ; the severed ends were brought together and neatly united with fine carbolized silk sutures. The operation was exceedingly interesting to me, but involved no new principle or procedure ; rigid attention to antiseptic details being, however, noticeable at all points. On the 24th of June the patient was in the hospital garden ; a few days after that she went home, feeling well and enjoying good appetite and digestion.

The statistics of operations upon the stomach performed in Professor Billroth's klinik from the year 1880 to 1885, as given by Dr. Haeker in his interesting report, are briefly as follows. The number of cases operated upon is thirty-two :

Gastrotomy, for removal of foreign body.—One case ; recovered.

Gastrorraphy.—Two cases ; both fatal. One for spontaneous rupture of the stomach after a full meal and wine ; operated upon ten hours after the accident. The other, a case of suicide by revolver shot, which was found on post-mortem to have penetrated the liver and aorta as well as stomach.

Gastrostomy.—The fistulous opening was made into the stomach in four cases on account of œsophageal stricture. Three strictures cancerous, one due to corrosive substance swallowed, resulting in three deaths and one recovery.

Gastrectomy.—(1) *Resection of pylorus for cancer*—Fifteen cases, giving seven recoveries and eight deaths. (2) *Resection of pylorus for stricture due to cicatrices*—Three cases ; one recovery and two deaths. (3) *Removal of a wedge-shaped piece of pylorus*—One case, with fatal result.

Gastro-enterostomy.—In cases where removal of the pylorus was, owing to adhesions or extensive malignant-involvement, impossible, Winiwarter's operation of forming a fistulous opening between the third portion of the duodenum and the great curvature of the stomach was performed. Eight cases; three improved by the operation and five deaths.

We have here thirty-two cases, with nineteen fatal results. A superficial glance would naturally lead us to the conclusion that these operations are too dangerous to be attempted. A fair look, however, places the matter in an altogether different light. The two cases of gastrorraphy cannot be regarded as deaths from the operation; the conditions in both cases previous to operation were such as almost to preclude the possibility of a successful issue. The condition of the remaining seventeen must also be remembered: among these, without exception, the powers of nature were wasted through starvation and, with few exceptions, vitiated by malignant influences. They were patients in which no major operation would be likely to succeed well; such patients as have in the past, as a rule, been hopelessly left to the melancholy death of starvation. When we remember that this was true not only of those who died, but also of the thirteen who recovered, we must look with hope and admiration upon the work of Vienna's great surgeon.

A more general preparedness than at present obtains among surgeons for such operations is a great want of the present day. Apart altogether from malignant cases and long-standing strictures, cases of intussusception and perforating wounds of the abdomen not unfrequently call for surgical interference. Then, perforations of the walls of the alimentary canal from ulcer comparatively frequently occur. They are treated with opium or morphia, and a prognosis of fatal result is given, while the cause of fatal peritonitis lies free in the abdomen capable of removal. Billroth has shown that even in the starving and diseased, operations on the stomach and bowels may be followed by good results. In the class of cases last mentioned, the general health of the patients is usually good. This being the case, why should prompt operation not be followed by many recoveries, thus avoiding the necessary result of non-interference, viz., the fulfilment of the prognosis.

J. H. D.

Reviews and Notices of Books.

Practical Human Anatomy: A Working-guide for Students of Medicine and a Ready-reference for Surgeons and Physicians.—By FANEUIL D. WEISSE, M.D. New York: Wm. Wood & Co.

This handsome work adds another to the large number of text-books of practical anatomy which have been issued during the past few years. America has produced but few works on practical anatomy, reprints of English books, such as Holden, Heath, Ellis, &c., being very popular on this side of the Atlantic. The author of the work under consideration has had twenty years' experience as a teacher of anatomy, and appears thoroughly at home on his subject. The book is divided into a number of dissections (27), commencing with the perineum and ending with the brain. The method of dissecting the various parts is described in separate sections and in smaller print. The work is magnificently illustrated with no less than 222 full-page plates, and the text appears to be principally a description of the plates.

We do not think this book will ever be made much use of as a dissector's manual, as it is too large, and, besides, the plates would be of but little use in the dissecting-room; however, it will prove of the greatest value to both physicians and surgeons as a reference handbook, the illustrations being wonderfully correct and life-like. What is most refreshing in these days of illustrative plagiarism is that nearly all the plates are original and from actual dissections. We think the work would have been much improved had some plates of frozen sections, such as those of Braune, been included, such illustrations have now become a necessity to the proper understanding of the relations of organs especially. The work is singularly free from errors, both anatomical and typographical, and Dr. Weisse is to be much congratulated on the production of such a monument to his industry. We can heartily recommend this (might we call it) pictorial panorama of anatomical dissections to all those who have no opportunity of referring directly to the dead subject.

Fractures and Dislocations.—By T. PICKERING PICK, F.R.C.S. Philadelphia: Lea Brothers & Co.

This little work is one of the series of clinical manuals published simultaneously in England and America. The author has not pretended to write an exhaustive manual on the subject, for the prescribed size of the book would not allow this, and as it in no way competes with the larger works, such as Hamilton, it should not be contrasted with them. Mr. Pick has endeavored to make the manual essentially clinical and practical, and has succeeded fairly well. For the student it will prove a very convenient book of reference, and from its handy size and moderate price we have no doubt will become popular. In one or two points, however, we think the author somewhat old-fashioned, rather inclined to favor the old-time English methods than to adopt much that is new. He is essentially conservative, and only adopts antiseptic methods doubtfully and half-heartedly. In speaking of the treatment of compound fractures, he does not impress upon the reader sufficiently the great importance of strict antisepticism according to modern methods, no particular directions are given, and iodoform and bichloride are not even mentioned in this connection. In his own practice, the author adopts Listerism, but is not a very ardent disciple. Now, if there is one thing more than another that has been revolutionized by the introduction of antiseptic surgery, it is the treatment of compound fractures, and teacher and author should speak and write words having no uncertain sound when instructing students and practitioners on this subject. In speaking of fractures of the thigh, the old method of treatment by Lister's splint is described, but treatment by extension is merely alluded to, and the only method of counter extension described is by the perineal band. The method of counter extension by raising the foot of the bed is not even alluded to, and the method of treatment by long splint, combined with Buck's extension, is not mentioned. By the way, Buck is always spoken of as Busk, a mistake which should be corrected in a new edition. Fracture of the patella is well described, but, again, the rules of treatment are not clearly laid down; a number of methods of treatment are mentioned, but no one given in detail. We are glad to see that Mr. Pick does not advise indiscriminate wiring of the fragments in this fracture; here his conservatism stands him in good stead. The immediate application of plaster-of-paris bandages is not mentioned, though the application of some immovable apparatus is advised after the swelling goes down. In speaking of dislocation of the hip, too much space is taken up with describing and illustrating the obsolete methods of reduction by pulleys, etc. Colles' fracture is well described, and, as in all works on fractures, more space is devoted to it than it deserves, the treatment is shortly, though thoroughly, described. We have only spoken of a few of the points, we think, that might be improved upon, and these have been taken at random. The teaching of the book, as a whole, is such that the student will not be led far astray, and the descriptions of the various forms of dislocation and fractures are excellent. The work is well illustrated, and the typography good.

The Principles and Practice of Surgery.—By FRANK HASTINGS HAMILTON, A.M., M.D., LL.D., late Professor of the Practice of Surgery and of Clinical Surgery in Bellevue Hospital Medical College; Consulting Surgeon to Bellevue Hospital, &c., &c. Illustrated with 472 engravings on wood. Third edition, revised and corrected. New York: Wm. Wood & Co.

Among American and Canadian surgeons, no name on this continent is perhaps more familiar than that of Dr. Frank H. Hamilton, and few are held in higher esteem. He is better known, however, for his classical work on Fractures and Dislocations than as an authority on general surgery. The fact that the present work has gone through three editions is the best proof of its excellence, giving, as it does, the results of an experience extending over nearly half a century.

There is much in this book to commend it to the general practitioner as well as to the student of medicine, although we regret to find a spirit of dogmatism pervading it here and there, the author being very positive in the expression of his views, and evidently loth to accept the experience of others where that fails to coincide with his own. Thus, for example, he reiterates the statement made many years ago in the work already referred to, namely, that shortening is inevitable after fracture of the shaft of the femur. In fact those who, like Gamgee, Hunt, Dorsey, and others, have been rash enough to record a contrary opinion, are characterised as "less distinguished, less observing and less honest surgeons, and are plainly informed that they "do not tell the truth." This may be a *frank* way of dealing with one's adversaries, but it is not gentlemanly. Why should a transverse fracture of a long bone, or even an oblique fracture, vigorously treated by extension, always result in shortening? Doubtless rash statements have been made on the subject by careless observers, but surely all the cases reported without shortening have not been fabrications.

So elsewhere statements are made which are not borne out by the experience of others equally able and illustrious. The gynæcologists especially are dealt with very summarily on two or three occasions. To give an instance—the author referring to "Alexander's Operation for Retroflexion," says, "It seems to me incredible that any person who has acquired even the rudiments of surgical science should perform an operation so unsound in theory and plainly so unsafe in practice." Now, we know that the most satisfactory results have followed the performance of this operation in the hands of Alexander himself and other surgeons, and it is not by any means proved that it is either unsound in theory or unsafe in practice.

We repeat there is much in Dr. Hamilton's Surgery to admire. The arrangement of the material is good, and the headings are clear and concise. The last chapter, which is supplementary, "On the Art of Primary Union," is well worthy of perusal, although we should like to have found so able a surgeon a more pronounced advocate of antiseptic measures.

A System of Practical Medicine by American Authors.—Edited by Wm. Pepper, M.D., LL.D., Provost and Professor of Theory and Practice of Medicine and Clinical Medicine in the University of Pennsylvania; assisted by Louis Starr, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Vols. IV and V. Philadelphia: Lea Brothers & Co.

Vol. IV: Diseases of the Genito-Urinary and Cutaneous Systems; Medical Ophthmalmology and Otology. — The fourth volume, which forms an addition of 877 pages to this important standard work, contains many valuable articles. Those upon the affections of the kidney are contributed by Drs. Edes, Delafield and Tyson. The diseases of the female genital organs are treated of at considerable length, there being found amongst the contributors to this department the following well-known names: Drs. T. Gaillard Thomas, W. H. Byford, Wm. Goodell, Jenks, and Engelman. The diseases of the skin are treated of by Drs. Duhring and Stelwagon; medical ophthalmology by Dr. Morris, and medical otology by Dr. Strawbridge. The character of the articles is of a high grade, fully expressing the actual state of American teaching upon the various subjects. The volume maintains in every way the reputation gained by its predecessors, and with reference to it we can but repeat the strong expressions of very earnest admiration which we have already employed towards the earlier numbers of the series.

Vol. V.: The Diseases of the Nervous System.—That department which is, in many respects, of all the most interesting —the nervous system —occupies the whole of the fifth and last volume. It occupies no less than 1326 pages, wherein the various portions of the nervous system are carefully divided and their various functional and organic derangements exhaustively treated. A large number of writers contribute separate articles; amongst them we may specially mention the following: Drs. E. C. Seguin, C. K. Mills, H. C. Woods, Wharton Sinkler, McLane Hamilton, Morris Lewis, J. C. Wilson, F. Minot, E. C. Spitzka and others. This concludes the most complete American Practice of Medicine extant. It takes its place as the standard work of reference for that country, and is in every respect highly creditable to the various authors who have taken part, to the learned editor who has arranged and superintended its entire contents, and to the publishers who have so promptly placed the successive volumes in the hands of the subscribers. In conclusion, we would merely quote the following sentence from the editor's "valedictory," for the information of those who may not have seen the early prospectus. "The number of articles is 185, written by 99 authors, covering, with indexes, about 5000 pages, and throughout its whole extent the original purpose has been kept constantly in view, that the practical character of the work should adapt it specially to the needs of the general practitioner."

Diseases of the Stomach and Intestines. A Manual of Clinical Therapeutics. — By PROF. DUJARDIN-BEAUMETZ, Physician to the Cochin Hospital, Member of the Academy of Medicine, &c. Translated from the fourth French edition by E. P. HURD, M.D., President of the Essex District Medical Society, &c. With illustrations and chromo-lithograph. New York: Wm. Wood & Co.

The above is a very valuable and original work, being the product of one of the ablest minds in the profession. The author is well known by his numerous contributions to scientific medicine. He has been engaged in the publication of an important and exhaustive series of "Leçons de Clinique Therapeutique," and the present volume is the third and last portion of the whole number. It is, as stated, a manual of clinical therapeutics; all the functional and organic diseases of the digestive organs being grouped together, and the special therapeusis of these being carefully considered. The subject is treated of in a masterly way, and one peculiarly his own. "I know," says the author, "of no study more fascinating than that of diseases of the digestive tube, and it is one to which I have directed particular attention." Certainly the study is one upon which considerable light has recently been thrown by researches into physiological chemistry. We are called upon daily to treat these derangements of the primæ viæ, and our success will mainly depend upon the degree to which we have mastered the essential points in the conditions likely to disturb the normal processes taking place therein. The sphere of Dr. Dujardin-Beaumetz's book and its claims to attention are well expressed by the translator, who says: "In this, much that in ordinary text-books on Materia Medica and Practice is rather embarrassing than helpful to the practitioner is omitted, while the important data, set forth in strong light and grouped in a few masterly generalities, indicate to him where he can be truly useful, where his intervention is demanded, as well as the limits of that intervention."

Handbook of Practical Medicine.—By HERMANN EICHHORST, Professor of Special Pathology and Therapeutics, and Director of the University Medical Clinic in Zurich. Vol. I. Diseases of the Circulatory and Respiratory Apparatus. Illustrated. New York: Wm. Wood & Co.

A good handbook, written by one of the well-known German authors, which has been recently added to "Wood's Library." The various subjects coming under the separate chapters on pulmonary and cardiac disorders are treated of in a concise manner necessitated by the limits of the volume, and yet few important omissions will be found. Amongst the diseases of the circulatory system, we find very excellent chapters upon the neuroses of the heart, disorders which are not so carefully studied as the coarser and more obvious organic affections, and yet an acquaintance with which is fully as valuable to the practising physician. This section concludes with a short account of thoracic aneurism, and the other rarer conditions—stenosis, rupture, &c., of the aorta. The diseases of the larynx are carefully treated, and well illustrated. The trachea, bronchi, larynx, pleuræ, mediastinum, &c., all receive due attention. The book will be useful to all desirous of having at hand a reliable guide to the teaching of the German school on this important class of diseases.

Surgical Diseases of the Kidney.—By HENRY MORRIS, M.A., M.B., F.R.C.S., Surgeon to and Lecturer on Surgery at the Middlesex Hospital, London. With 6 chromo-lithographic plates and 40 engravings. Philadelphia: Lea Brothers & Co.

A very complete account of the various so-called surgical affections of the kidney and the structures immediately adjacent. The growing importance of the subject, in view of the frequency with which the operations of nephrotomy and nephrectomy are performed, and the brilliant results very often obtained, is sufficient to ensure a cordial reception to Mr. Henry Morris' book. Although such interesting matters as those concerning malformations, fusions, movable and floating kidney, &c., are discussed, yet the *pièce de resistance* consists in the account of pyo and hydronephrosis, scrofulous and calculous kidney, together with the means for their accurate diagnosis and successful treatment. The whole is ably handled, and forms an excellent addition to the "clinical manuals."

Books and Pamphlets Received.

THE RETROSPECT OF MEDICINE. A half-yearly journal containing a retrospective view of every discovery and practical improvement in the medical sciences. Edited by Jas. Braithwaite, M.D., Lond. Vol. XCIII, January–June, 1886. London, Simpkin, Marshall & Co.

ANALYSIS OF THE URINE, with special reference to the Diseases of the Genito-Urinary Organs. By K. B. Hofmann and R. Ultzman. Second edition; revised and enlarged. New York, D. Appleton & Co.

HANDBOOK OF PRACTICAL MEDICINE. By Dr. Hermann Eichhorst. Vol. II—Diseases of the Digestive, Urinary, and Sexual Apparatus. New York, Wm. Wood & Co.

THE GENUINE WORKS OF HIPPOCRATES. Translated from the Greek with a preliminary discourse and annotations by Francis Adams, LL.D. Vol. II. New York, Wm. Wood & Co.

BRIGHT'S DISEASE AND ALLIED AFFECTIONS OF THE KIDNEYS. By Charles W. Purdy, M.D. Philadelphia, Lea Brothers & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, May 14th, 1886.

J. C. Cameron, M.D., 1st Vice-President, in the Chair.

Dr. A. L. Smith, for the author, read a paper entitled

Notes on Phthiriasis.

By P. W. P. Mathews, LL.D., M.R.C.S.E., Etc.,
Dominion Coroner for the North-West Territories and Medical Officer of the Hudson Bay Company, etc.

as follows :—

A case of somewhat unusual occurrence came under my notice here some short while since—one of phthiriasis. It is the second only that I have personally known, and I trust that it will be of sufficient interest to justify me in offering you a few notes, both in connection with the case itself and the disease.

George "Beardy," an Indian, aged 30, was admitted to the York Hospital suffering from capillary bronchitis. In ordinary cases, and in cases other than the one I am about to describe, it would be, or ought to be, unnecessary to touch upon cleanliness, both as regards the patient and his surroundings, even in an Indian cottage hospital; but the nature of the case requires my emphasizing the fact that every rational and judicious precaution was taken to ensure cleanliness, both in the washing of the patient and in the changing of the body and bed clothes. The condition of the patient varied for several days, and on the evening of the tenth, symptoms of pulmonary congestion set in. I was in attendance for the greater part of the night, and on again visiting him at about 10 o'clock in the morning, found him in a comatose condition. Giving a few directions, and re-covering his chest, which he kept constantly exposed, I left, and in two hours time was hastily called by the nurse, who stated that "he was being eaten up." Upon arriving, to my astonishment, and, I must say, to my interest, I found the man one literal mass of lice, creeping over the bed-clothes, crawling on the body—one slow-moving, disgusting mass, but a living, suggestive "precursor of the grave." He was as carefully cleansed as he could be under the circumstances, and shifted to another bedstead, with clean bedding, etc., but all to no purpose, for within two hours the body was again simply infested by vermin, and so it was to the end, some six hours afterwards. Upon examination of the skin, I found a multitude of irritable-looking spots on many parts of the body, from which the nits could be detached by lateral pressure. The louse itself was the common body or clothes louse (*pediculi vestimenti*). In this connection I must note a few cases which I have collected from various works.

Dr. Whitehead relates a case which I shall here abbreviate: R. S., aged 43, a farmer, strong, of sanguine complexion, contracted a virulent form of syphilis in April 1840, for which he was chiefly treated with induretted sarsaparilla. Seven months afterwards he suffered severely from secondary symptoms, when he was placed on a course of mercurial medicine, and became salivated, with great relief to the disease. At the end of 1841 he again sought advice, stating that for several weeks past he had been annoyed by the presence of lice about his person, chiefly on the trunk. He was scrupulously clean in his habits, and had never before been troubled in a similar way. No lice were found about the head. What little hair he had was clean, fine, and silky. The vermin so increased in number, and produced such mental distress, that fears began to be entertained for the integrity of his intellect· Upon an examination of the skin, the nits were there found to be imbedded, and at this period the generation of the insects got so considerable that the flannel vest put on clean in the morning was crowded with them by the end of twenty-four hours. For some time remedies were unavailing: sulphur, oxymuriate of mercury, white precipitate, and hellebore were freely tried, with little or only temporary benefit. At length, by mere chance, a mixture of iodide of potassium and prussic acid in full doses was given; and in a few days, after taking sixteen or eighteen draughts, the cure was permanently completed.

There is another case in which the quick generation of the body louse was remarkable. The patient was a young lady, a member of a most respectable family, in whose skin, mostly below the margin of the mammæ, the nit was found in a small pimple which gave exit to its contents like a pustule in acne. She had been troubled with these lice for several years. Mr. Bryant, of London, England, has reported a somewhat similar case : A patient, who had been a governess, and who was 30 years of age, was admitted into Guy's Hospital. The whole of her body was literally covered with lice ; the irritation and scratching having given rise to excoriations and scabs. She was put into a warm bath, and all her clothes were taken away. Every precaution was adopted to remove all the insects, but two hours afterwards her body was again covered with them, although she lay in a clean bed. She was again thoroughly washed, but the vermin reappeared immediately. All the remedies employed proved useless. Bernard Valentin has also related the history of a man who suffered from intolerable itching on all parts of his body, while his skin was covered with tubercles. On incising these, each was found filled with lice. Bremser once met with a mass of lice in a tumor on the head. And Jules Choquet observed some thousands of these insects in a subcutaneous cavity. According to Erasmus Wilson, the explanation of these cases is simple ; for he says that the pediculi creep from the outside of the skin into follicular tumors, when they feed on the contents, and are afterwards found as the sole occupants of these sacs.

As is well known, lice, under certain circumstances, become developed on the surface of the body, a fitting soil being supplied by filth and by the morbid secretions in skin affections, as well as by constitutional disease ; but I wish the more particularly to refer to what appears to be an idiosyncrasy, or rather a condition of constitution, that in some cases appears to favor the development of pediculi, as is evidenced by the case under my own care, and those I have advanced as further illustrations, so that the statements of some old authors that divers persons "have come to their ends, being devoured by lice," are not so very improbable after all. But what appears so remarkable in this case of the Indian Beardy, is what I may, with some reason, term the apparently spontaneous generation of the pediculi, their existence not having been noticed at an earlier stage. The man was carefully and watchfully tended from first to last, and, further, he insisted upon his chest being constantly exposed. At ten o'clock in the morning it was perfectly free from " bite" or " hæmorrhagic speck " ; at twelve, it was one mass of eruption. Difficulties only become intensified upon a further examination of the case, for, in the first place, their period of incubation is six days, and, secondly, judging by their organization, it is perfectly clear that these pediculi are air-breathing animals ; and that, consequently, they cannot exist as adult insects under the skin, where respiration would seem to be impossible.

Among the poorer classes in England (I do not know if the same holds good in Canada), any unwonted appearance of lice in connection with a sick person is invariably regarded as a precursor of death. Is it possible that the approaching dissolution is indicated or appreciable to the insect, by the lowering of the surface-temperature, etc., and its quittance of the body to the bed-clothes attributable to this instinct ?

Remarks by DR. SMITH.—Such cases as this are rare in this part of the country, because it is difficult to find any one so dirty as to give the body-lice a chance to breed in such quantities. Cases of pediculus capitis and pediculus pubis are quite frequent at the Dispensary, but he has seen only a few cases of pediculus corporis, principally in neglected old men. Among the Indians of Lake Huron and Georgian Bay, and also among the shanty-men in the Upper Ottawa, the pediculi corporis were frequent guests, and by the way they were tolerated one might think that they were not altogether unwelcome ; and as these persons often wear the same flannel shirt for six months or a year without washing it, it was easy to see that they would multiply continuously, as the eggs hatch in six to eight days, and one female may see the birth of five thousand descendants. The disease is easily cured by means of an ointment containing one part of the oil of delphinum staphisagria and seven parts of lard. I have also found the Ung. Hydrarg. Ammon. very effective.

DR. J. C. CAMERON said that coal oil was a good application for body lice, and if Balsam Peru be added to it, the odor was hardly objectionable. Chloroform he has found useful for crab lice.

General Tuberculosis following a Nephritis.—DR. WYATT JOHNSTON exhibited the kidney, bladder and other organs, and DR. J. C. CAMERON related the case:

Patient, aged 26, had remote history of phthisis in one of his cousins. He had knocked around the world a good deal, exposing himself at times to great hardships, and drinking pretty freely. He always enjoyed good health till November 1884, when he had an attack of scarlet fever, followed by sharp nephritis. He came under Dr. Cameron's observation in Feb. 1885. Ten per cent. of albumen was then found in his urine, also some red blood-corpuscles and casts, chiefly hyaline. Under treatment his symptoms improved; the casts disappeared in about two months, but more or less blood and albumen remained all summer and autumn. The presence of urethral trouble was suspected, as an old gonorrhœa and gleet had persisted for a long time. No examination was made till Jan. 1886, when Dr. Roddick passed a No. 3 steel sound with some difficulty through a long, deep-seated stricture; a sharp attack of cystitis followed, which did not yield to internal treatment. When the acute symptoms had somewhat subsided, he was etherized, and an attempt made to pass a catheter and wash out the bladder, but nothing could be got past the stricture. His condition was becoming so serious, that perineal section was decided on. A careful examination of the lungs revealed nothing abnormal. The operation was performed on 17th Feby., and his immediate sufferings thereby relieved, but his symptoms did not markedly improve. High, irregular temperature, rapid pulse, profuse perspirations and gradual emaciation were the chief symptoms. About March 1st he spat up blood, and on examination, dullness was discovered at both apices; softening soon began, and went on rapidly, till, in six weeks, his lungs were completely riddled. His wound never healed. He died 23rd April. The diagnosis lay between a general tubercular condition underlying the renal and vesical catarrh, probably fanned into flame by scarlatina, and pyæmia, due to retention of putrid matters in the bladder by a tight stricture. The rapidity of the lung break-up was particularly noticeable, repeated examinations failing to detect anything abnormal in lungs till about six weeks before death. The right kidney was made up of sacs of pus, the walls being infiltrated with tubercles. The ureter was dilated, and its walls thickened. The bladder showed evidences of the cystitis, and its walls near the exit of the ureter were also thickened with tubercular infiltration. The other abdominal organs were full of tubercles, with the exception of the left kidney, which was normal. Dr. Johnston found bacilli in the lungs, kidney, ureter and bladder.

Dr. Campbell said that though tubercular disease usually begins in the lungs, still it frequently attacks other organs first. In this case, most likely, it commenced in the bladder or kidney. Although it is said that no nurse ever contracted disease in the Brompton Consumption Hospital, yet he had several times seen the disease attack a husband who had a consumptive wife, and *vice versâ*. He advised separation, where one had the disease. He believed strongly in the heredity of consumption.

Death following Abortion.—Dr. Rowell exhibited the uterus and Dr. Armstrong related the case. He said the cause of the abortion was uncertain ; the patient, aged 23, had had several before. On his arrival he found the fœtus, aged about six months, had come away, and he had no difficulty in getting away the placenta. Two days after, the woman became delirious, and had a very rapid pulse and fever. She continued suffering from apparent septicæmic poisoning till May 13th, when she died, having aborted April 5th. He was at a loss to account for the cause. The discharges were at no time offensive ; she never had a chill, and never complained of abdominal pain. He washed the uterus out, using a return tube. Toward the end, vomiting set in. Dr. Rowell said that on opening the abdominal cavity he found the intestines matted together and covered with lymph and pus ; the pelvis was filled with offensive purulent matter, and in the left iliac fossa was a collection of similar-looking pus, enclosed in inflammatory adhesions. The mucous membrane of the uterus was thickened and covered with a thickish bloody discharge. On the right side of the body of the uterus was a small fibroid.

Dr. Trenholme said that most likely she had had old pelvic adhesions, with pent-up inflammatory matters, and that the fresh trouble (abortion) again lighted up the mischief. It being painless may have been due to tolerance from repeated abdominal trouble.

Dr. Kennedy thought this case in many respects similar to one he attended some years ago. The woman had had five attacks of peritonitis. Deep pressure over the abdomen gave little or no distress. He diagnosed the case to be tubercular peritonitis. She died suddenly, and a post-mortem examination revealed a large pelvic abscess which had burst, the attacks previous no doubt being due to slight ruptures of the abscess. Ovariotomists found they had better results follow operation where peritoneal adhesions existed, producing a tolerance to interference.

Dr. Shepherd thought if the case could have been diagnosed, the proper thing would have been to open the abdomen and wash out the peritoneal cavity. Recovery had followed operations for inflammation produced by perforation of the appendix vermiformis.

Dr. Wilkins said he had seen an absence of evidence of pain in some typhoid fever cases produced by the dulling effect of the typhoid poison. In one fatal case of perforation, there was no evidence of pain shown.

Stated Meeting, May 28, 1886.

T. G. Roddick, M.D., President, in the Chair.

Case of Hysterical Paralysis in a Boy.—Dr. Lapthorn Smith exhibited this case, and gave the following history:—

Joseph L., aged 11 years, was always a delicate child; never had scarlet fever nor measles. He has often had running at ears (otorrhœa), but never had any disease of his eyes until this year. Family history good; father and mother very healthy, as also his grandparents. Has six brothers and sisters living, and none dead. There is no evidence of syphilis or tubercle in any of the family. Last June his mother first noticed that he dragged his left leg in walking, and though he was able to go about the house, he could not go out. He had no photophobia at this time. He dragged his leg for about a week, and then recovered without any treatment, returning to school, where he continued to attend until the vacation on the 1st August. From June to August, however, he complained of pain in the left knee, sometimes during the day and sometimes at night; but he did not drag his leg again until January of this year, when one day he became slightly deaf, and both external ears became exceedingly painful to the touch. Next day his eyes were red and swollen, especially the lids, and about two weeks later his legs became so weak that he was unable to stand. He could bend them easily, but could not keep them straight. One evening in March his left eye suddenly closed, and neither he nor any one else was able to open it again until a few days ago. Almost from the beginning of this attack, his legs, from the middle of the thighs to the toes, have been exquisitely painful to the touch, as also have been his external ears. This hyperæsthesia was real, for his mother several times, while he was asleep, touched him lightly on these over-sensitive parts, with the result that he suddenly awakened with a frightened scream. His father also tested his paralysis by setting fire to his clothes, but he was unable to get up. I tried several times to touch him gently on the affected parts, with his eyes blindfolded, but always with the effect of making him cry, although he would allow me to pinch him moderately in any other part of the body, even within half an inch of the sensitive parts. Neither was I able to expose his pupil. He had such a dread of the light reaching the retina of his left eye, that even when I forced the lids apart he rolled the cornea up out of sight. I examined his spine carefully, and there is no tender spot, and the patellar reflex is quite normal. I thought his case one of functional nervous disorder, and as he was pale and weakly, I placed him on a ferruginous treatment with syrup of iodide of iron. He had only taken this remedy for less than a week when his father returned from the country with some ferns and Dr. John's herb, which a friend recommended him to use on the boy's legs. He boiled them together, and rubbed the boy's legs with the decoction during ten minutes in spite of his cries, and afterwards made poultices of the leaves and bandaged them on to his legs. The next morning the boy walked with a little difficulty, but without assistance, into the kitchen. That morning the pain left his legs, but instead he complained of a feeling of pins and needles in his feet, and also in his left eye, which he was able to open three days later. He is now quite well.

Dr. Smith had met with somewhat similar cases in young females, but this was the first he had seen in a boy, and he thought it of sufficient interest to bring before the society.

Dr. Henry Howard said the temporary paralysis, whether it occurred in males or females, was always hysterical, and recovered without treatment, and that unfortunately the recovery was generally attributed to supernatural miracles.

Gunshot Wounds of the Chest.—Dr. Jas. Bell then read a paper on this subject. (*See page* 1.)

Dr. Shepherd congratulated Dr. Bell on the success of his cases—a success which would, before the days of antiseptic surgery, have been almost impossible. He thought that when empyema followed gunshot wounds that it should be treated as other empyemas—by free and dependent drainage. He deprecated the probing of gunshot wounds, and related a case of pistol wound of the lung which was in his wards at the General Hospital last summer, where the wound healed by first intention, and with the exception of spitting a little blood, and having a local area of dullness for a few days, no other symptoms were present, the patient recovering completely without the slightest fever. The treatment was altogether expectant, and no search for the bullet was made.

Dr. Henry Howard said that fifty years ago he took lectures on surgery, delivered in Dublin by Sir Philip Crampton, Surgeon-General, who said, speaking of wounds received in the battle of Waterloo, that recovery generally took place if the ball passed through the chest and came out, but death generally followed if the bullet remained in the chest cavity. Much of the success now seen in these cases was due to drainage.

DR. FENWICK said he regretted not being present when Dr. Bell read his paper. He spoke against being too anxious to remove bullets lodged anywhere. Too much probing often did great harm. If the bullet could not easily be reached, drain, and leave it. Nature generally encysts it, and so prevents its doing mischief.

SANITATION IN JAPAN.—We may ignorantly suppose that the civilisation of Japan does not come up to the Western standard. At any rate, the people believe in sanitation. The following extract is from the "*Sei-i-Kwai*" *Medical Journal*, published in Tokyo:—"In connection with the efforts of the sanitary authorities to combat disease and death, during 1885, we have, in Japan, no popular tumults to record, no mobbing or injury of health officers or physicians engaged in their work of mercy, no organised attempts to hamper and arrest the execution of the various measures enforced for the public benefit, even when most onerous or even apparently arbitrary and severe. On the contrary, we are glad to acknowledge the hearty and intelligent assistance received, not only from the officers of the different departments of the Government, both local and general, but from private organisations and individuals as well, while the people at large have readily acquiesced in the work of sanitation, occasionally rendering substantial aid to the authorities."

NUMBER OF PHYSICIANS, MIDWIVES, &C.—According to statistics recently published by the Central Sanitary Bureau of the Home Department, the total number of practitioners in Japan up to August, 1883, was 39,768, of which number 3,395 held licenses from the Home Department, and 36.373 held licenses from the prefectures. As compared with the total number of practitioners in 1881-2, there was an increase of 3,472, of which 531 held licenses from the Home Department, and 2,941 held licenses from the prefectures. This gives a ratio of one practitioner to 910.82 of the population. The total number of specialists was 1844, of which 191 were oralists, 701 oculists, 567 obstetricianc, and 387 bone-setters. The total number of midwives was 19,035, or one to 49.18 child-births.—"*Sei-i-Kwai*" *Medical Journal.*

CANADA

Medical and Surgical Journal.

MONTREAL, AUG., 1886.

CHANGES IN OUR MEDICAL ACT.

The triennial meeting recently held has confirmed the greater part of the recommendations contained in the report of the committee which we published two months ago. The changes proposed are of a very radical nature, entirely altering as they will the power of the Universities to present their graduates directly for their license. The advisability of establishing a Central Examining Board has now been fully entertained both by the Governors of the College and also by the general meeting of the profession. It will, therefore, doubtless come into force as soon as the necessary legislation shall have been obtained. The proposed composition is such that all interests seem to be fairly represented. The total number will be twenty, more than would be required, except for the absolute necessity for a double set of examiners, English and French. In this way ten committees of two each (one English and one French) can be formed, which will probably be sufficient to carry out a complete programme of examinations upon all the subjects. Every candidate is to be examined chiefly by the member of the committee speaking the same language, but it is understood that his colleague shall be at liberty to take any part in the examination that the case may seem to call for. Provision is also made for the possibility of diagreement between any two examiners as to the merits of a candidate, by which the matter can be appealed to the whole Board, with whom then rests the final judgment. It is proposed that the Board shall consist of two representatives from each of the schools, and as many from the outside profession. This seems a very fair and reasonable arrangement at first sight, but in our opinion the efficiency of such a body would have been greater if a larger proportion had been schoolmen. The examination of a candidate in a fair and impartial way, and yet with the necessary thoroughness, is an Art, and one which it requires considerable experience to acquire. It is admitted by everyone who understands the matter that those persons who have been engaged for some years in the regular work of teaching, are certainly the best fitted for conducting examinations. It is not that we at all doubt the existence of many outside the schools who are equally familiar with the entire range of certain branches of the curriculum, but that we fear that some of those not teachers will find it very difficult to become efficient and skillful examiners. We do not think that any change is possible in the direction we have indicated, but nevertheless it is well for all to express freely their opinion upon this important matter. There will, after the proposed amendments come into force, be but one meeting of the Board for the granting of licenses. It will be held in May, in time to receive the report of the Central Board.

Another important part of the business was the adoption of the proposed alteration in the method of conducting the triennial elections. The Committee recommended the election of representatives in each district mentioned in the Medical Act, but there seemed a strong feeling on the part of country members to still further decentralise, and hence the result was that the Committee's plan was finally accepted, with the exception that a representative is to be chosen from each *judicial* district. The plan seems quite feasible, and promises to give universal satisfaction.

The matter of the preliminary examination gave rise to much discussion. The Board of Governors decided that no change in the present requirements was desirable. The general meeting, however, rejected this part of the report, and passed a resolution adding a number of additional branches to the obligatory subjects. Now, as a matter of fact, the preliminary examination in this Province is, in the opinion of a great many well-informed persons, quite high enough to ensure a reasonable education upon the part of any one who is admitted to the study. It is to be observed, also, that a very large percentage of those presenting themselves for the first time are rejected and obliged to appear for examination at the end of another year. No complaint has been made of a low standard of marking, and, as we have just said, the proportion of failures under the existing requirements is very great· It is very hard, therefore, to see what good reasons there can possibly be for the addition of still more numerous subjects to a list which is already a pretty long one. There seemed, however, to be a determination to insist upon a number of branches which are taught at the principal French colleges throughout the Province with the view, it was urged, of inducing pupils to finish out what they call a *cours complet.* If this be finally adopted by the Governors—and we hope it may not be—it will result in those educated elsewhere than at the institutions named being obliged to secure private tuition to qualify themselves for the preliminary examination. The arguments showing the sufficiency of the examination as it now stands are unanswerable and guided the action of the Committee and of the late Board of Governors, and, although the general meeting has expressed an opinion otherwise, the new Board will have to come to a final decision, and we hope it will be in favor of the *status quo ante.*

COLLEGE OF PHYSICIANS AND SURGEONS OF THE PROVINCE OF QUEBEC.

A special meeting of the Board of Governors was held July 13th, 1886. Present: Drs. Lemieux (President), Belleau, LaRue, Simard, Lachapelle, P. E. Mignault, R. P. Howard, Parke, Leprohon, Kennedy, Durocher, H. A. Mignault, Marmette, Guay, De St. George, Hart, Rodger, Lanctot, George Ross, Austin and Campbell.

Reports of Assessors from Laval and McGill Universities were read and adopted.

Drs. Delaney and John Howe, graduates of Laval, Quebec, on presentation of their diplomas, received their licenses.

The report of the preliminary examination in May last was read, showing that the following gentleman had passed: Messrs.

Arthur Bariboult, Redolphe Cheviner, J. A. Charette, Frs. Desrosier, Emile Dumont, W. S. England, Paul Gagnon, Chs. Gerard, John Hayes, Edmond Huot, Henri Lanciaux, Theodule L'Ecuyer, L. E. La Roche, G. E. Le Sage, L. de Martigny, Pierre Lussier, Frs. Marchand, J. L. G. Mason, C. D. Meikle, Oscar Mercier, G. L. McKee, C. E. Morin, L. A. Noel, J. O. Portras, Edmond Provencal, Euclide Rainville, Hector H. Roy, F. Serres, L. St. Germain, F. E. Thompson, L. V. Vezina, E. A. V. Villeneuve, Armand Bedard, T. Belanger, Ant. Brossard, L. M. F. Cypihot, Jules Danderand, Joseph Desy, A. U. Dorais, Henri Fortier, E. Laurin, F. Lavoie, A. Lecavalier, Jos. Lemai, Chs. Lemaire, J. A. Mognan, Jos. A. Rene, F. Richard, L. Robillard, Edmond Savard, A. Taillefer, J. C. P. Tasse, Chs. Vezina, Jos. A. Bedard.

The Secretary then read the report of the committee as published. A minority report was then read, when it was decided to take up the original report, and discuss it clause by clause.

The College first decided in the affirmative that it was decided to have a Central Board of Examiners.

Clause 1 was amended to read as follows :—

The Board shall be known as the Central Board of Examiners, and shall consist of two (2) examiners on each subject. That the examination shall be made in the language of the candidate, provided that the two examiners shall have the right to examine alternately, and when they disagree, the examination on the subject shall be taken before the full committee.

Clause 2, so as to read, " The Central Board of Examiners shall consist of two representatives from each medical school, and an equal number not connected with any school."

Clause 3 was amended so as to correspond to the amendment in clause 2.

The remainder of the report was carried with the following alterations :—

1. The Central Board shall meet alternately in Quebec and Montreal.

2. The preliminary examination to be held once a year, on the first Wednesday in July, in Quebec and Montreal alternately.

3. Graduates in Arts not exempted from the preliminary examination.

4. The Board of Governors to meet annually on the second Wednesday in May, alternately in Quebec and Montreal.

The triennial meeting was held May 14, 1886. About 150 were present.

The minutes of last meeting were read and adopted. Dr. E. P. Lachapelle presented his annual statement.

Dr. Lemieux, president, addressed the College on the work done by their governors during the past three years.

Dr. Fortier objected to some items of expenditure, and moved, seconded by Dr. Laberge, that the secretaries prepare annually a statement of the work done by the college, and have it printed, and a copy sent to each member of the college. This was lost. The college at one p.m. adjourned till two p.m. At two p.m. the college again met, and the following gentlemen were named scrutineers—Drs. Kennedy, Beaudry, Faucher, Brunelle, W. Mount, L. Mignault, J. B. Gibson, S. Duval, C. S. Parke, Chartrand, Guay, Lanctot, L. LaRue and Hurtibise.

It was announced that the ballot would close at four p.m.

The Secretary for Montreal read the report adopted by the Board of Governors the previous day.

Dr. Cotton moved, seconded by Dr. Norman A. Smith, " That each judicial district be granted power to elect a governor of the C. P. and S. P. Q., and that each said judicial district elect its representative. Carried.

A motion of Dr. Marcil, seconded by Dr. Durocher, as follows, was carried :

" That the preliminary examination for the study of medicine comprise, in future, the subjects of physics, chemistry and philosophy. That this preliminary examination be held on the second Wednesday in July of each year."

Moved by Dr. Dagenais, seconded by Dr. Brosseau : " That the primary and final examinations shall be held on the second Wednesday in July in each year." *Carried.*

At ten minutes past six o'clock the scrutineers announced the result of the ballot to be as follows :—

City of Montreal.—Drs. T. A. Rodger and J. L. Leprohon.

District of Montreal.—Drs. H. A. Mignault, J. A. Duchesneau, J. B. Gibson, D. Marcil, F. D. Lafontaine, N. H. Ladouceur, A. Longpre, and J. E. Turcot.

City of Quebec.—Drs. A. G. Belleau, L. LaRue, R. Q. Rinfret, A. Watters, C. S. Parke, and E. A. de St. George.

District of Quebec.—M. Guay, F. Fortier, E. Rousseau, F. E. Grandbois, L. H. Labrecque, Hon. T. Robitaille, and A. Laferriere.

District of Three Rivers.—Drs. Hon. J. J. Ross, Badeaux, and Desaulnier.

District of St. Francis.—Drs. Austin, Paré, and Thomas La Rue.

The college then adjourned.

MEETING OF THE NEW BOARD OF GOVERNORS.

The new Board of Governors then met, and elected the following officers :—

President, Dr. W. H. Hingston (Montreal) ; Vice-President for Quebec, Hon. Dr. Ross, re-elected (Quebec) ; Vice-President for Montreal, Dr. J. L. Leprohon (Montreal) ; Treasurer, Dr. E. P. Lachapelle, re-elected (Montreal) ; Registrar, Dr. L. LaRue, re-elected (Quebec) ; Secretary for Quebec, Dr. A. G. Belleau, re-elected (Quebec) ; Secretary for Montreal, Dr. F. Wayland Campbell, re-elected (Montreal).

The following Assessors were named :—

McGill University—Hon. Dr. Church and Dr. P. E. Mignault.

University of Bishop's College—Drs. T. A. Rodger and H. A. Mignault.

Laval University, Quebec—Drs. Simard and Sewell.

Laval University, Montreal—Drs. Marcil and Gibson.

Victoria University—Drs. A. C. MacDonnell and O. Raymond.

A committee consisting of Drs. Lemieux, George Ross, Hingston, F. W. Campbell, E. P. Lachapelle, Rodger, Belleau, and de St. George, were appointed to prepare amendments to the existing Medical Act, in accordance with the report adopted by the Governors at the special meeting on the 13th July and the resolutions passed at the Triennial Meeting.

CANADIAN MEDICAL ASSOCIATION.—The annual meeting, as already announced, will be held in Quebec on the 18th and 19th of the present month. Arrangements have been made with all the railway and steamboat companies for the usual reduction of fares. The old city of Quebec has always been an attractive point, and the unrivalled water-trip by which it is reached is a favorite holiday route. We trust that a great many will be induced to combine a short vacation with attendance at the meeting of our national association. Certificates of membership and other information can be obtained on application to Dr. Jas. Bell of Montreal, who is at present Acting-Secretary. We append a list of the papers promised so far, which will no doubt be largely added to before the meeting:—

1.	Heart Clot	Dr. Osler, Philadelphia.
2.	The Medical Jurisprudence of Crime and Responsibility	Dr. D. Clarke, Toronto.
3.	Diabetes Mellitus	Dr. Dupuis, Kingston.
4.	The Treatment of Biliary Calculi	Dr. J. Ferguson, Toronto.
5.	The Inhibition of the Heart in Diphtheria	Dr. Gardiner, London (Ont.)
6.	Alexander's Operation, and the Treatment of Displacements of the Uterus	Dr. A. L. Smith, Montreal.
7.	Excision of the Elbow Joint	Dr. Roddick, Montreal.
8.	The Treatment of Tuberculous Glands of the Neck	Dr. Fenwick, Montreal.
9.	Myelo-Sarcoma of the Arm—Amputation at the Shoulder Joint	
10.	A Case of Pelvic Abscess	Dr. Alloway, Montreal.
11.	Tracheotomy in Membranous Laryngitis	Dr. Bell, Montreal.
12.	On a case of "Ainhum"	Dr. Shepherd, Montreal.

Medical Items.

— Dr. R. P. Howard, having resigned the position of Vice-President of the International Medical Congress, to be held in Washington next year, Dr. J. A. Grant of Ottawa has been appointed to the same office by the Executive Committee.

— Dr. Oliver Wendell Holmes, called by the *Hospital Gazette* the " venerable and much bedoctored Breakfast Table Professor," has received the following degrees during his recent visit to Great Britain: D.C.L., Oxon; Litt. Doc., Cantab.; LL.D., Edin., and LL.D., Dublin.

ARSENIC IN SKIN DISEASES.—The Editor of the *Journal of Cutaneous and Venereal Diseases* is desirous of ascertaining to what extent arsenic is used by American physicians in the treatment of skin diseases, and also the results of their experience as to its therapeutical value. Information upon the following points is requested of every physician who reads this:—

Are you in the habit of employing arsenic, generally, in the treatment of skin diseases?

In what diseases of the skin have you found arsenic of superior value to other remedies?

What ill effects, if any, have you observed from its use?

What preparation of the drug do you prefer, and in what doses do you employ it?

Address, Editor of *Journal of Cutaneous and Venereal Diseases*, 66 West 40th Street, New York.

ANOTHER HERMAPHRODITE.—Among the replies to an advertisement of a musical committee for " a candidate as organist, music-teacher, &c." was the following one: " Gentlemen,—I noticed your advertisement for an organist and music-teacher, either lady or gentleman. Having been both for several years, I offer you my services."

" THE OTHER SIDE OF COCAINE—THE BAD SIDE," was the subject of a paper presented by Dr. A. W. Calhoun, of this city, to the State Medical Association, in Augusta, last week. The doctor argues strongly against the use of cocaine in cataract operations by extraction. He stated that before he began the use of cocaine from ninety-five to ninety-seven per cent. of all cataract operations by extraction proved successful, and that in a large number in which cocaine had been used he had bad results. He has abandoned its use altogether in operations by extraction.—*Atlanta Medical and Surgical Journal.*

—Puffendorf tells the following: " A man who had sore eyes went to a horse doctor for relief. The doctor applied to his eyes an ointment he was accustomed to use on horses. The man became blind, and sued the doctor, but the judge acquitted the horse doctor, on the ground that if the man had not been an ass, he would never have applied for relief from a horse-doctor."

A TROUBLESOME PATIENT.—An incident in professional life is reported from Vienna, in which a tailor, on being told by his physician, whom he had called to consult as to a disease from which he was suffering, that his recovery was impossible, forthwith shot the physician in two places, and then turned his arm—or rather arms, for there were several—against himself, with a fatal result as far as he was concerned. Nine shots in all were fired; and the number may, perhaps, be accounted for by the fact of this recalcitrant patient being a tailor; but it is to be hoped that a needless complication will not be introduced into professional life by such a practice becoming general. Medical men have already a good deal to put up with from patients; and, if further difficulties be introduced, the relations of doctor and patient may become strained. In any case, the medical man, if he must needs take lead, would probably prefer it in the shape of false coins to the more conical form of revolver bullets. We are glad to state that the physician was not much hurt, and will shortly be able to resume what may be considered an eventful career.—*British Medical Journal.*

— Upwards of eight of the rioters who broke open the Chicago drug store and regaled themselves with the wines which they found on the shelves—wine of colchicum among the rest—have crossed the bourne the returns from which are few and somewhat apocryphal. The despatch with which the crossing was effected, will encourage the authorities to insist on the druggists laying in a full stock of this drug against future possible deployments under the red flag. As a remedy for anarchy it is S. S. S.—sure, speedy and sweet—much more pleasant than cannabis and plumbum, the agents heretofore mainly relied on.

— It was a sight to behold the late meeting of the American Medical Association from the rear. A larger proportion of bare vertex presentations was, probably, never before in attendance at any meeting. A rough estimate showed that at least one doctor in every four had shed the capillary from the dome of his brain pan. The sight was a striking illustration of the fact that while temperance, chastity, and mental industry are conducive to happiness, these virtues are not promotive, but, on the contrary, are rather destructive of the growth of hair.—*Medical Age.*

FARINACEOUS DIET.—In reference to the statement that chemical analysis of pop-corn shows it to contain more albuminoids than most of the other cereals, and that in certain parts of the West it is extensively used as a regular article of food, the *New York Medical Record* says that our Pilgrim Fathers made some personal experiments with pop-corn; the result being that they started a Day of Thanksgiving for not having to live on it any longer. Whereupon the *American Practitioner and News* adds: " In the light of the above chemical revelation, the logical fitness and poetic beauty of the following old rhymes are manifest:

'And there they sat a-popping corn,
John Styles and Susan Cutter;
John was as strong as any ox,
And Susan fat as butter.'

That those Calvinistic ascetics known as the Pilgrim Fathers should cloy upon so rich a diet is no matter for surprise when one notes the fondness of their descendants for dry codfish, beans, and starved mackerel."

" IT'S GERMAN, YOU KNOW."—

"We consider a coccus the cause of the gleet,
That is German, you know; so German, you know!
We dress a cut finger in a hay-stack of peat,
That is German, so German, you know!

"We insert a gum larynx and celluloid tongue,
We take out the spleen and resect the lung,
We save at the spigot and leak at the bung,
For 'tis German, all German, you know!"

CANADA

MEDICAL & SURGICAL JOURNAL

SEPTEMBER, 1886.

Original Communications.

ADDRESS DELIVERED BEFORE THE CANADIAN MEDICAL ASSOCIATION.

By T. K. HOLMES, M.D., Chatham, Ont., President.

Gentlemen of the Canadian Medical Association—When, a year ago, you paid me the high honor of electing me to the presidency of this Association, I will not pretend to deny that the distinction that appointment conferred afforded me the most lively gratification, which, however, was qualified by several considerations that were to me of quite a serious character. Not the least of these was the knowledge that I must address an audience distinguished for intelligence and for scholarly attainments, both professional and general, and that the learning and ability of my predecessors in office would not detract from the difficulty of the task. Indeed I felt, and still feel, that my chief qualification for the position in which your kindness has placed me is an unswerving interest in the prosperity of this Association, which has influenced so strongly and so favorably the medical profession of this country. While expressing my most sincere thanks for the highest honor at your disposal, I feel sure that the same kindly feeling which prompted its bestowal will render easy the duties of presiding officer, and that the same zeal which has hitherto marked the scientific work of this Association will characterize the meeting now convened.

Romance and history combine to render the city of Quebec the most interesting spot in Canada, and our Association may well be congratulated on the privilege it enjoys this year in holding its session in a place rendered famous by so many circumstances. The adventurous quest and the indomitable will of the early navigators who laid the foundation of civilization in this country when they planted the colors of France along the shores of the St. Lawrence may well serve us as models for emulation in our more peaceful search after that scientific knowledge which contributes so much to the happiness of mankind. If our efforts be at all comparable to theirs, equal honors and equal blessings may be expected to result from our endeavors. In this connection I may express the wish that the same spirit of enlightenment and progress that characterizes our parent countries, France and England, may animate their descendants in this young Dominion, and that the Canadian profession of medicine may not be unworthy the great names of Harvey and Lawrence, of Hunter and Pasteur. It will certainly contribute greatly to the progress of medical science in this country if the two races whose ancestors have led the van in Europe go hand in hand and vie with each other in creating a professional status here inferior to that of no other country. Some of the means by which we may hope to accomplish this will be the subject of my remarks to-day.

The architect who aims at lasting fame not only lays broad and deep the foundations of his work, but anticipates each step in the growing structure even to the crowning event of its completion. He selects the material, superintends each process of manufacture, shapes every part, and embellishes the whole until it rises in symmetry and perfection, and stands the glorious and enduring monument of his creative genius In this land there is arising a temple whose foundation is based upon the accumulated labors of some of the greatest architects of human happiness. Their names shine with brilliancy unabated all down through the vista of past years, and animate and enlighten all who labor in the same profession and emulate their achievements. We are the privileged architects of this temple of medicine in our country and generation, and I trust that the marks of our skill may not be indistinguishable in the rising edifice. The progress of scientific medicine in the recent past is the result very largely of the development of the science of biology which has done so much to establish medicine on a scientific basis.

Until the study of life in its elementary forms was rendered possible by modern instruments of precision, empiricism necessarily entered largely into all medical progress, and it was maintained as an opprobrium that medicine was no more than an enlightened empiricism. This is true, but it could not have been otherwise since, until the birth of biology as a science, medical knowledge had either to remain at a stand-still or to progress by a series of empirical jumps which sometimes left it in a more advanced state of usefulness, and sometimes failed to do so even in the slightest degree. Although empiricism in medicine has been such a laborious means of advancement, we must admit that it generally contained some grains of truth, and that when it failed to accomplish what was expected of it, the reason of the failure lay, not in the worthlessness of the efforts at progress, but in the difficulty of separating the grains of truth from the abundant chaff in which it was contained. Each new fashion, while it has contained some truth, has failed and given place to another little in advance, not because it contained no truth, but because the truth it did contain was incomplete. When, however, the study of biology was established on a scientific basis, medicine, which is but an applied science of biological doctrine, became less empirical and more scientific, and by the aid of physiology and pathology, which are the necessary sequence of biological investigation, has advanced to the present high and satisfactory position it occupies. The very fact that morbid processes are viewed and studied from a physiological standpoint and are estimated and measured by the laws that govern elementary processes of life renders it certain that the progress of the recent past and of the present is on surer lines and firmer foundation than ever before, and that the future of medicine will be the glorious sequel of the present, as the present is the glorious sequel of the past. It justifies the belief that the advantages to the human race likely to accrue from the prosecution of medical studies and investigation pursued on these lines will be far greater in the future than in the past, that physiology and pathology, which are but in their infancy, are destined to illuminate the dark places in medicine and reveal the true cause of much human suffering and premature death.

We are accustomed to regard with wonder the achievements of modern invention in the art of war, and to contemplate with amazement the perfected instruments of destruction that strengthen the hands of modern belligerents, but the general who advances to battle with all these at his command has no greater advantage over a barbarous foe than modern medical searchers after truth in the realms of disease have over their empirical brothers of the prebiological period. Possessing these advantages, and stimulated by this prospect, it is reasonable to suppose there will, in the near future, arise men whose investigations, beginning where those of Sanderson, Koch, Virchow and Pasteur leave off, will be equally brilliant and equally conducive to human happiness and longevity. The country that produces these men will be the country that affords the best medical education to those entering the profession, and that most facilitates original investigation for those who have chosen that field of labor. No physician in this country worthy of the profession to which he belongs can be indifferent to the position Canada shall occupy in the honorable and honored competition in which so many are and will be engaged.

The future of the medical profession in this as in any other country will largely depend upon the natural ability and the mental and moral training in childhood and youth of those entering its ranks ; so that in considering any scheme for the creation of a high standard of medical qualification, domestic training and the plan of education pursued in public schools must be recognized as bearing an important part.

It has been said that poets are born and not made : a saying that is not untrue when applied to medical men, for a combination of mental and moral qualities which cannot be wholly acquired enters into the character of every great physician. It is cause for regret that greater discrimination is not exercised in directing young men in the choice of a business or profession, and that convenience and not natural aptitude should frequently determine a young man's course in life. There are so many examples of men rising from obscurity to great eminence in every vocation that there has arisen a popular impression that all obstacles and natural defects can be compensated for or can be overcome by diligence and perseverance on the part of any aspiring youth. It would be wrong to underestimate the value of industry and high aspiration, but these, while they can improve all and can render mediocrity respectable, can never supply the place of genius. While it is impossible to create genius by any system of training, it is almost impossible to repress it altogether by any carelessness or neglect.

"That many mute inglorious Miltons lie buried in our churchyards, I venture to doubt: the fire of a Burns is not easily hidden under a bushel, but some smaller lights may be quenched, and the best of such men, like Burns himself, may be thwarted and broken in heart." (*Dr. Allbutt.*)

Other things being equal, the child who, from infancy, is trained to think and to reason correctly and to express its thoughts clearly, will be more likely to attain eminence in mature life in all pursuits of an intellectual character than the child not so trained ; indeed, skilful training in early life is essential to success in persons of average natural capacity, and is of unquestionable importance to all.

The efforts to establish and to maintain an efficient system of education in this country are worthy the highest commendation, but the task is a difficult one and there is danger of enthusiastic legislators over-stepping the mark and making our sons and daughters mere receptacles of knowledge instead of creators of knowledge by failing to recognise that it is vastly more important that a man should think and reason correctly than that he be the possessor of multitudes of facts and definitions. Physicians, with such questionable elementary training, are like the artificer well supplied with the tools of his craft but lacking the skill to use them. It is not to such that we may look hopefully for real progress in our science ; they make up the great army of routine practitioners who trouble themselves little with profundities and are like Dr. Sangrado, who felt quite sure that those of his patients who, under the care of his pupil Gil Blas, died from excessive bleeding and the copious drinking of warm water, did so because this his panacea was not applied with sufficient vigor and determination. It is probably not incorrect to say that most medical men in Canada are of opinion that the chief defect in our school system lies in the oversight here referred to.

The curriculum for medical matriculants in Canada must create a higher average intellectually among young men aspiring to the profession, but there can be no doubt that a widening of the curriculum so as to embrace a more extensive knowledge of the natural sciences would greatly facilitate the acquisition of knowledge presented to, and required of, medical students. An acquaintance with the laws relating to climatology would serve a useful end in the study of epidemic and endemic diseases, and in an estimate of the influence of climate on disease in general; an acquaintance with minute organisms and histological structures such as could be readily acquired in any high school provided with a microscope would prepare the mental soil for the reception and quick germination of the seeds of knowledge sown by teachers of physiology and kindred subjects in medical schools. The medical student, who learns something of biology, of cells and germs, and of bacterial life only after he has entered upon his course of medical lectures, is at a great disadvantage and loses much time in a bewildering effort to master names and technicalities, and I can conceive of no more irksome task for a teacher than to lecture to a class of young men laboring under this disadvantage.

The relations existing between medical schools and licensing bodies in this country are so satisfactory that little desire has been manifested to alter them, and it is beyond doubt that to these relations we owe in great measure the improved status of medical education here.

When the great discovery of Columbus opened to the old world the unknown and virgin resources of the new, the most progressive nations entered eagerly into keen competition for the advantages this discovery presented. National ambition and individual courage and endurance combined towards the great aim and object of colonization and development of natural resources in this continent. The results are patent to all; a newer and greater freedom and civilization in the new world are the rich fruits of these vigorous pioneer efforts, and the evidence exists in the glad and prosperous millions of the western world. Analogous to this is the meteoric brilliancy of the discoveries in medical science within the past fifty years. Physiology, pathology, the etiology of disease, physiological medicine, preventive medicine, these are some of the fields laid open to the modern physician, and they leave no lack of opportunity for the exercise of ambition, skill, and philanthropy. Nearly all European nations and the individual States of the neighbouring Republic have shown their determination to participate in the honorable achievements in medicine thus rendered possible in the near future. Schools for the pursuit of original investigation have been liberally endowed by these governments, and this liberality has been supplemented by the wise and princely donations of private individuals.

Sanderson and Klein, Koch and Pasteur, our own Osler, and many others scarcely less distinguished, are devoting their lives with indefatigable zeal to the elucidation of scientific questions upon which rests the superstructure of medical practice, and they are enabled to do so only through the liberality of the various governments under which they live. Research of this kind can only be carried on successfully by men naturally adapted to such work, and who are free from the care and anxiety inseparable from the lives of those engaged in the active practice of their profession. Hence the absolute necessity for the endowment of institutions of this character. The large expenditure necessary to the equipment of a laboratory for such work has greatly retarded it in Canada, and until means are provided we must be content to occupy an insignificant place in the great race now being run. Can it be that this country or its wealthy citizens will remain indifferent in this matter, while our nearest neighbor is lavishing millions of dollars to attain honorable eminence in the progress of medical science ? Scarcely a State in the Union that has not its well endowed university, and the princely gifts of Cornell, of Johns Hopkins, of Mr. Stanford, of Mr. Vanderbilt and of Sir Donald A. Smith are the great beginning of greater things. Who can estimate the blessings to the human race that must arise from the wise munificence of these noble men! Millions yet unborn shall speak their names with feelings of reverence and love, nor will other monuments be needed to make their names immortal. In this connection, I would suggest that a committee of this Association be appointed, to report at the next annual meeting upon the best means of establishing one or more laboratories where original investigation in medical studies may be carried on.

Medical societies constitute a most important factor in the advancement of medical knowledge, and it is much to be regretted that they are not everywhere established. It is safe to say that the maintenance of active local societies contributes immensely to the knowledge of their members by encouraging careful observations in private practice and more extensive reading and research. Aside from a scientific point of view, the harmony engendered by these meetings eliminates much of the jealousy and misunderstanding that are so humiliating and so subversive of individual happiness and public respect. The general organization of small local societies would be a sure means of improving the representation at the larger ones, and would secure to them papers and discussions of a higher character. Provision has been made in Ontario by the Medical Act for the formation of territorial associations in the different electoral divisions, and in some of them most prosperous societies have existed for many years, and the reports of their proceedings constitute valuable additions to medical literature.

Of all the means of medical progress, few could be more advantageously utilized than the accumulated experience of men in private practice if they could be induced generally to keep a systematic record of their more important cases. Time, skill, and the privilege of post-mortem examinations are essential to the successful recording of cases, and their absence is doubtless the chief cause of the neglect so universal in this matter. Time so consumed would be more than repaid by the increased skill acquired; the high standard of qualification now required of graduates should remove the second difficulty, and if requests for autopsies were made in all cases necessary to verify a diagnosis or to elucidate an obscurity, the prejudice now existing against them in the public mind would to a great degree disappear. Let rural practitioners who underrate their opportunities of contributing to the general fund of medical knowledge remember that Jenner, McDowell and Koch were not metropolitan physicians, and were unknown to fame until their great discoveries, wrought out by diligent study and observation, placed them among the great benefactors of mankind. Observation and reflection are the parents of discovery, and never fail to produce their offspring, although the gestation may be long and the labor hard. Every truth so revealed is like a lantern, the light of which may be turned on the dark places of our field of investigation and new truths stand clear to our mental vision, and we walk boldly and safely on, using each new thought to illumine the obscurity that surrounds and precedes us.

The building up of a science is a slow and laborious process, and facts must be supplied by a multitude of workers. The scholar who deciphers the cuneiform inscriptions of ancient Babylon or the hieroglyphics of Egypt, and contributes to our knowledge of these nations, must be aided and preceded in his work by the archæologist who discovers and the laborer who unearths these imperishable records of past events. So in the building up of medical science, the humblest worker is not to be despised, for his contributions may be and often are essential, but to be available, his thoughts and observations must be recorded, that they may be weighed and winnowed by those suited to the task.

All who have read the lectures of Murchison on " Functional Diseases of the Liver," of Roberts on " The Digestive Ferments," or of our own Osler on " Malignant Endocarditis," must be impressed by the great impetus given to practical medicine by these, and will need no arguments to convince them of the desirability of the endowment of similar lectureships here. From a literary and scientific standpoint, the advantages accruing to the profession from such lectures would be important, but of even more importance would be the encouragement afforded to the more gifted and aspiring of our own Canadian physicians and surgeons. As Canadians we may feel proud of our country and of its physical and political excellencies, but we may rest assured that, so far as we medical men are concerned, others will estimate us by the reasonable and practical standard of our contributions to medical knowledge and by our scientific attainments. No conservative clinging to obsolete methods on the one hand, or the multiplication of weak meretricious literature on the other, can impose upon the learned in the professional world, and the sooner we create strong incentives to scientific work the sooner will the workers be forthcoming. I would here offer the suggestion that this Association take into consideration the establishment of lectureships similar to those in England and other older countries.

Of all means enumerated for the advancement of medical science, individual effort undoubtedly ranks first. Associations can teach and stimulate, but they can never supply the place of study and observation. Truth only yields her wealth to him who lays siege to her shrine. Emmerson says the hardest task in the world is to think. We try to look in the face an abstract truth, and we cannot do it. The mind swerves from the encounter, and thick darkness prevails. We return to the charge and try to force Truth from her citadel, and then in a moment, when we least expect it, a rift in the cloud comes, a ray penetrates our minds, light floods in more and more, until objects, dim at first from sudden light in dark places, become real shapes, and we guage their dimensions and estimate their proportions with unerring exactitude. Few truths are discovered but by this laborious process, and because we evolve them slowly and often only partially by delving beneath the surface of things, it is better to labor so than not to work at all, for when the surface is broken and disturbed, others will see clearly what we only half perceive, others will perfect what we are able only to dimly outline.

It requires no prophetic eye to perceive the future greatness of Canada. Her vast extent and varied and inexhaustible natural resources everywhere abounding are such that it would seem impossible for any series of unfortunate events to stem her progress, or to divert her course in the contest of nations for pre-eminence in all that constitutes true greatness. The spirit of progress is abroad armed with the all-compelling weapons of modern invention, hampered by no medieval absurdities and thwarted by no ignorant prejudices ; we are justified in entertaining the most exalted and hopeful view of the future of our country, and may deem ourselves fortunate in bearing a part in the development of so fair a heritage. As physicians, the part, we assume, is not an insignificant one. To enact wise laws, to encourage commerce, to preserve peace within our borders, and to command the respect of neighbouring nations are objects worthy the most exalted ambition and the most patriotic determination ; but will it be said that the aims of medical science are less exalted or less conducive to national prosperity or individual happiness ? To cure disease, to alleviate suffering, to extend the limit of human life, to enlarge the field of human usefulness, to be able to prevent disease by removing the cause ; surely the profession that devotes its energies to the accomplishment of these objects is entitled to the fostering care of governments and to the liberality of wealthy citizens.

" A sound nation is a nation that is composed of sound human beings, healthy in body, strong of limb, true in word and deed, brave, temperate, sober, chaste ; to whom morals are of more importance than wealth. It is to form character of this kind that human beings are sent into this world, and those nations who succeed in doing it are those who have made their mark in history. They are nature's real freemen and give to man's existence on this planet its real interest and value." (*Froude.*) In the not-distant future this Dominion will be the home of fifty millions of people with all the wealth and all the greatness that implies, a thought that may well inspire us with feelings of pride and satisfaction ; but the wise man will not be so much impressed by the vastness of our territory, the multitude of our people, or the size and wealth of our cities, but will be more concerned in the problem of the social advancement, the civil liberty, the physical perfection, the scientific status and the moral rectitude of our teeming population. When that time comes may the science of medicine have contributed its share towards the creation of a people unsurpassed for physical perfection and mental sprightliness and for all those virtues that are born of these. Should these hopes be realized, then, indeed, would happiness prevail and prosperity sit as a ruling genius on the brow of every hill, the bosom of every lake and the bank of every stream ; and the application to our country of the language of one of England's greatest poets would scarcely be considered hyperbolical, when he says :

> " All crimes shall cease and ancient fraud shall fail
> Returning Justice lift aloft her scale,
> Peace, o'er the world her olive wand extend
> And white-robed Innocence from heaven descend."

QUARTERLY RETROSPECT OF SURGERY.

By FRANCIS J. SHEPHERD, M.D., C.M., M.R.C.S, Eng.,
Surgeon to the Montreal General Hospital ; Professor of Anatomy and Lecturer on Operative Surgery, McGill University.

Tetanus.—The pathology of tetanus is as yet but little understood. Cases of cure of this disease are from time to time reported, they are doubtless quite authentic, and show that the disease is not necessarily fatal. Chloral in large doses is the favorite remedy, and in some cases the results of treatment by this drug are encouraging, whilst in others chloral appears to have not the slightest influence for good on the disease. Till the pathology of the affection is better known, all treatment must be to a greater or less extent empirical. Many observers look upon tetanus as due to the introduction of some virus from without, for nearly all the cases follow the receipt of an injury ; the cases of so-called idiopathic tetanus being rare, and in some instances due to forgotten injury. The nervous theory has much in its favor, and a cure which recently has occurred in Zurich illustrates this. A boy, aged 14, was admitted to Conrad Brunner's wards at Zurich for a fracture of the left radius, which had occurred three weeks previously. The 14th day after the fracture the child observed that he could not stretch the fingers of his left hand ; his parents noticed that when he walked his body was bent forwards. The symptoms became more and more marked, and the child was sent to hospital. Symptoms of tetanus, risus, trismus and emprosthotonos were marked. On examining the patient, there was evidence of a fractured epiphysis of the radius, badly reduced, and a bulky callus just below the articulation. The parts were exposed by incision, when it was found that there was pressure on the radial nerve by new formation attached to the callus. The compressed nerve was set free and the prominent portion of the radius resected. The symptoms of tetanus slowly disappeared. Three weeks after the operation the patient was well. (*Paris correspondence of British Med. Journal*, July 3rd, 1886.) I on one occasion saw a case of tetanus where the post-mortem examination showed in sole of foot a small piece of leather (thrust into foot by a nail), and near this an abscess the size of a pea surrounding the terminal filament of a nerve.

The nervous theory, however, does not account for all the cases. For instance, in those cases where tetanus follows decomposition in a wound. Such a case lately came under my notice at the Montreal General Hospital. A man had two of his fingers crushed, and at the end of a week presented himself for surgical treatment. The fingers were in a gangrenous condition and horribly fœtid. Amputation was immediately performed, but next day tetanus developed, of which he died in a week. Chloral was employed in full doses without effect. In such a case as this the theory of M. Gauthier is applicable, viz., that certain chemical changes, the result of decomposition, ensue, and the products are certain animal alkaloids or leucomaines, which produce symptoms like those of poisoning by strychnine or some other vegetable alkaloid.

At the 15th annual congress of German surgeons held recently in Berlin, Rosenbach of Göttingen read a paper supporting the germ theory of tetanus, and gave the results of a number of experiments performed on guineapigs and mice. (*Med. News*, Aug. 7, *Med. Record*, June 5th, and *Centralblatt f. Chirurgie*, No. 24, 1886.) A man was received into the Göttingen clinic suffering from tetanus consequent on gangrene of the feet. Rosenbach took some small pieces of tissue, an hour after death, from a part of the foot below the line of demarkation, and put them under the skin of the thigh of two guineapigs. The animals soon became tetanic. From these, other guineapigs were inoculated in a series, one from the other, and then the virus was transferred to mice. All the animals inoculated ultimately died of tetanus, the most marked symptoms being spasm of the extensors of the tail and of the hind legs. In the inoculation material Rosenbach discovered a bristle-shaped bacillus similar to that described as the cause of earth tetanus ; this he successfully cultivated in coagulated serum. He was not able to obtain pure culture of any single bacillus, but he succeeded in causing tetanus with this mixed bacillus. The bristle-shaped bacillus was always obtained in conjunction with the bacterium of putrefaction. However, as the latter alone does not cause tetanus, he thought it only reasonable to attribute the production of tetanus to the bristle-shaped bacillus. Rosenbach thinks the experimental result is important from its correspondence with the fact that tetanus in human beings is apt to follow putrefactive wounds. The next thing to find out is the orign of this bacillus ; in this connection it is interesting to note that Nicolaier and Flügge, whilst investigating the micro-organisms of garden soil, discovered that a culture of a certain form of bacillus found in it when injected into rabbits, guineapigs and mice caused symptoms like tetanus as well as malignant œdema. In regard to the mode of propagation of this bristle-shaped bacillus and infection of the whole system, Nicolaier found it in the sciatic nerve once and in the spinal cord twice. Rosenbach found it twice in the spinal cords of rabbits that had been inoculated. In Rosenbach's cases the inoculation period was not less than 24 hours or more than 36.

In the discussion which followed the reading of this paper, König stated that the experimental tetanus produced by Nicolaier and Rosenbach in animals was identical with that which occurred in man and that which not unfrequently occurs after castration in horses. In these the spasms often began in the muscles of the extremities and back. In man, tetanus does not always begin with trismus, but there is, sometimes, first spasm in abdomen or extremities and muscular rigidity at the point of injury. Socin said that he also had produced tetanus by the inoculation of garden-earth, which was undoubtedly true tetanus. Ebermann (St. Petersburg) thought that the presence of ptomaines might explain the occurrence of tetanus.

The tendency of the present day is to attribute every disease to some special form of germ, and tetanus has not escaped; even senile gangrene has its special bacillus. The germ theory of tetanus is by no means proved by the experiments of Rosenbach; the weak point in the theory is the very small number of these bristle-shaped bacilli that have been found throughout the body. The germ theory does not account for those cases of idiopathic tetanus that are occasionally seen (especially in young females), due to such causes as shock, fright, and injuries where there has been no wound of the skin. Other cases, again, support the theory that tetanus is due to some form of infection. Betoli relates the case of three slaves who died of tetanus after eating the flesh of a bull which had succumbed to the same disease. (*Quoted in New York Med. Record*, June 5th, '86.) The affection does not follow immediately on receipt of the injury, but only when certain putrefactive changes have ensued; the theory of leucomaines would apply here.

Whatever be the cause of tetanus, it is most probable that it is due to irritation of the nerves of the periphery, which is propagated along the trunks to the medulla; this is inferred from the peculiar symptoms and occasional recovery after administration of full doses of narcotics. Whether the irritation is due to bacilli, leucomaines, or something else, at the present stage of our knowledge of the pathology of the disease it would be a difficult matter to determine. More experiments are needed to convince the profession that the cause has been discovered in the bristle-shaped bacillus. It would also be interesting to know why dark races are more often affected than white, and why the disease is more prevalent in warm climates.

Verneuil (*Bull. et Mém. de la Soc. Chir. de Paris*, T. XI, p. 438), in speaking of tetanus, says: 1, Tetanus, as a complication of wounds, has not materially diminished with the introduction of antiseptic surgery; still, on the whole, the prognosis has from year to year improved, and recovery is no longer looked upon as a miracle. 2, Failing a precise knowledge of the ætiology of the disease, treatment is of course empirical, but recovery can be looked for only by the use of narcotics which destroy sensation and tactile irritation. 3, Of all the remedies, chloral is undoubtedly the best; good results now follow the use of opium and its derivatives. Chloral and morphia together, properly administered in full doses and given continuously, afford better results than any other remedies. 4, Tetanus is a cyclical affection, having a varied course, average duration being three weeks. 5, Indication for treatment continues throughout the disease, and remedies must be administered without intermission. Frequently the fatal result is due to irresolution and frequent change of remedies. (*Quoted in Centralblatt f. Chirurgie*, No. 30, '86.)

Dr. M. L. Moreau (*Alger Médical*, Jan. and Feb. 1886) reports a case with symptoms of tetanus cured by rest, sedatives and electricity. Patient had trismus and opisthotonos. He recovered in four days (?), during which period morphia and chloral were given in full doses, the patient kept thoroughly at rest, and was enveloped in cotton wool. The patient was of a neurotic temperament, and to obtain relief from his pain he covered his body with needle punctures. M. Moreau looked upon the case at first as one of hysteria, but on careful watching came to the conclusion that it was more allied to tetanus.

There is no doubt that many of the reported cases of rapid recovery from tetanus by morphia, chloral, etc., are cases of hysteria. I have seen several such which were diagnosed as true tetanus and yet recovered rapidly. The diagnosis of hysteria was confirmed by the attacks recurring at intervals of several months.

Treatment of Stricture by Electrolysis.—At a meeting of the Royal Medico-Chirurgical Society of London held in May last, Dr. Steavenson and Mr. Bruce Clarke contributed a paper on the treatment of stricture of the urethra by electrolysis (*Lancet*, May 29th, '86). The more extensive use made of electricity in surgery and gynæcology abroad, and especially its successful employment in the treatment of stricture of the urethra, induced the authors to undertake a series of observations to test the accuracy of the reports which had reached England. Their results bore out in every particular the reports of successes received from America. Electricity, on account of its power of splitting up compounds into their chemical elements, can be used as a substitute for ordinary caustics to the human body. It can be applied with success to parts difficult of access, such as the male urethra and the uterine cervical canal. Its effects would be limited to the points touched by the electrode. The caustic effects could be arrested or not commenced until the applicator, in the form of the electrode, was *in situ*, and the direction and extent of the caustic action was entirely under the control of the will of the operator. The authors gave the details of six cases of stricture of the urethra treated by this method. The advantages of the operation were as follows: There was usually no bleeding. If hemorrhage did occur, it was accidental, and usually showed that too strong a current had been used. No anæsthetic was required. If pain or discomfort were produced, it was trifling. The patient could, in the case of slight strictures, pursue his occupation during treatment. No antiseptics were required, as the process itself was aseptic. In the majority of cases there was no contraction or return of the stricture. Eschars produced by caustic alkalies were said to heal with less contraction than wounds produced in any other way, and electrolysis with the negative pole of a battery was a means of applying the same destructive action as was caused by caustic alkalies to parts difficult of access in a way which was impossible by any other method. Probably other chemical decompositions and contractions take place at the negative pole besides those characteristic of the caustic alkalies, but they have not up to the present time been thoroughly made out.

In the discussion which followed, Mr. Berkeley Hill said that, like the American cases, there was too little detail as to the existence, size and nature of the stricture; moreover, the final results had not yet been observed. He mentioned a case of stricture 2½ inches from the meatus, in which he had used this method, and observed the action with an endoscope. After applying the instrument 15 minutes there was an increase of one millimetre in the diameter of the urethra, but even this was not maintained, and after subsequent applications, with great narrowing of the stricture, other methods of treatment had to be employed. Altogether, he felt sceptical as to the real result of this method of electrolysis.

Mr. S. Edwards related a case of stricture where he could only introduce a filiform bougie, when by electrolysis he increased the diameter of the urethra so much as to be able to pass a No. 24 pewter instrument.

Mr. Buckstone Browne felt certain that several of the cases enumerated would not have needed internal urethrotomy, and could have been successfully treated by gradual dilatation.

Like all new-fashioned methods of treatment, the results reported are very favorable, and there are no failures. The method of treatment of stricture by electrolysis was introduced by Dr. Newman of New York about two years ago, when he published a paper on *Tabular statistics of one hundred cases of urethral stricture treated by Electrolysis without relapse.* Little detail was given, and the fact that all the cases were completely successful makes one suspicious. No doubt many of the strictures were such that any ordinary treatment would have availed. I know that some specialists in urethral surgery never fail to find stricture in every case examined, even if it needs a No. 25–30 instrument to detect it, and they cut every case, with the best results, of course, and without any relapses. But are they as successful in cases of true stricture, which are of long standing, and will admit, perhaps, only a No. 1 catheter or a filiform bougie, and where there is a quantity of indurated tissue about the seat of stricture ? It seems incredible that when a lot of tissue is destroyed by electricity that no scar tissue forms as the results of healing ; how is the solution of continuity caused by the electrolysis restored ? In one case reported by Mr. Clarke, rigors occurred. Dr. Newman apparently had no ill results at all following his operations. Urethral fever was never met with. This seems almost too good to be true, and if the results were not so invariably excellent, and one or two relapses had occurred, this method of treatment would have inspired more confidence. The method of operating is as follows: A gum-elastic or celluloid bougie, with a wire running down to the centre and terminating in a metal end from the electrode; this being connected with the negative pole, is held gently pressed against the stricture, and should be of a size larger by two or three mm. than is the stricture itself. To the positive pole is attached a pad electrode, which is placed over the sacrum, the patient lying on it. The battery used is Stoehrer's 30-cell. A current strength of from 5 to 8 milliampères is found requisite, and is gauged by means of a galvanometer.—(*S. Edwards*. *Annals of Surgery*, August, 1886.)

Surgical Treatment of Scrofulous Glands of the Neck.—Last year appeared a small book containing two clinical lectures on "*Scrofulous Neck and the Surgical Treatment of Scrofulous Glands*," by Dr. Allbutt and Mr. T. Pridgin Teale, both of Leeds. In these lectures the authors dwelt on the importance of early surgical interference in enlarged scrofulous glands of the neck, and a number of cases were reported in which this method of treatment was successfully employed. In cases where sinuses existed and the gland was broken down, the diseased structure was scraped out with a sharp spoon. These gentlemen were not the first to advocate or to perform extensive excision of scrofulous glands of the neck, but by the publication of their lectures they drew the attention of English and American surgeons to the subject. At the International Medical Congress held in London in 1881, these gentlemen also, in an able paper, announced their views on the treatment of scrofulous glands, which, in short, were "to radically extirpate every caseous gland and so quench promptly the smouldering fire." Since the introduction of antiseptic surgery, operations in the neck have become much more common and enlarged glands have been removed with impunity. I have myself removed as many as 30 to 40 enlarged glands in the neck at one operation, with the best results. The patients, as a rule, recover rapidly. The removal, after the first incision along the posterior border of the sterno-mastoid, should be effected by the fingers, aided, occasionally, with a few cuts of the knife. In many cases, although the glands from external manipulation may seem only enlarged and not softened, in turning out the deeper ones they are often found quite caseous. Care should be taken not to operate on a patient affected with lymphadenoma, and to avoid this mistake the glands in other situations (than cervical) should be examined, and also the spleen. Where there is a persistent elevation of temperature, without suppuration sufficient to cause it, it is better to delay operating.

The advantages of removing scrofulous glands are: 1, Freeing the patient from a tedious and exhausting local disease, which disfigures. 2, Removal of foci of infection, and so, perhaps, preventing general tuberculosis. 3, Improving the general health of patient by early removal.

In the *Lancet* of June 19th and 26th is a paper by Mr. Kendal Franks of Dublin "*On the nature of Scrofulous Glands in the Neck and their Surgical Treatment.*" After speaking of the connection between tuberculosis and scrofulosis, and stating his belief in their identity, he says that tuberculosis of the cervical glands was shown to be the result of the entrance of the tubercle bacillus at some contiguous abraded part, and most cases could be traced to some local affection, as eczema of the head, ulcers in the mouth, sore throat, etc., all of which afforded a nidus for the bacillus. The constitutional peculiarity, the "vulnerability of tissue," was a most important factor in determining a proper soil for the development of organisms, and much depended on the dose of the poison received as to the future progress of the case. Three courses were open to the gland to pursue: 1, Death of the bacillus and consequent resolution; this was unusual. 2, Suppuration and expulsion of the tuberculous virus; this might occur in one gland after another, and was of common occurrence. 3, The extension of the disease along the course of the lymphatic glands, and if this were not arrested, subsequent generalization of the disease. Mr. Franks urged that surgical measures should be guided by our present knowledge of the dangerous nature of the disease, that constitutional measures which should be used in all cases should not be trusted to exclusively, once the diagnosis as to the tubercular nature of the disease was established. He referred to three surgical measures as being the best, each of which was applicable to its own class of cases :—

1. *Scooping* should be confined to cases in which a sinus already existed, or in which a superficial abscess was connected with a caseous gland beneath the cervical fascia.

2. *Cautery Puncture*, recommended by Treves, was most applicable to softened caseous glands which had formed extensive adhesions.

3. *Excision*, which had the widest applicability, was chiefly suitable in cases where the glands were still hard and movable. It was applicable to extensive disease as well as to more limited cases ; but he urged that it should be employed early, when practicable, before softening or adhesions were formed. It was then possible to eradicate the disease through a small opening and thus save the patient from extensive operation subsequently, or, if that were not resorted to, to a prolonged and exhausting process of suppuration.

Mr. Fred. Treves, in an article on "*Rest in Treatment of Scrofulous Neck*" (*Lancet*, June 5th, 1886), strongly advocates the necessity of rest in the treatment of scrofulous neck. He says that, as a rule, scrofulous affections of the neck run a very chronic course, and are very obstinate in their relation to treatment. He attributes this to the fact that the neck is a part of the body that is in constant motion. When there is a glandular affection of the axilla, groin, etc., rest is enjoined, but the need for rest in affections of the neck is overlooked. He would suggest the employment of rest as a routine measure in the treatment of every case of scrofulous neck, it should supplement all other local procedures, and among them hold a predominant place. To obtain rest, he advises the employment of a splint, which he figures. It may be of felt, and takes its fixed point from the shoulders and back. The centre of the splint is strengthened by a slender strip of metal. This strip is carried up along the back of the neck, and at the occiput meets a cross piece which is moulded to the outline of the skull. The cross piece is kept in place by a narrow ribbon that encircles the forehead. In young girls and women, the cervical part of the splint can be entirely concealed by the hair. The splint in children and in males may be secured by straps. In adult females, it may be more conveniently attached to the stays. The felt is freely perforated, and the whole apparatus is very light. This apparatus keeps the neck still, but not rigid. It is not worn at night. Mr. Treves has had the best results from this method of treatment, and uses it not only for scrofulous necks, but for keeping the neck quiet after operations.

After discussing the cause of enlarged glands, and condemning the use of local applications, such as ointments, iodine and other remedies to the enlarged glands, while the cause of enlargement still exists, such as coryza, ozœna, eczema, diseased teeth, tonsillitis, etc., he goes on to say that the affection may be occasionally primary, and he has seen enlargement follow blows or result from a definite exposure to cold. He reviews the general management of the affections, advising sea air, cod-liver oil, etc., and then goes on to speak of local treatment, when he makes the remarkable statement that " excision with the knife, so far at least as the neck is concerned, can be rarely practised." Excision, he says, is only suitable in those cases where a " solitary gland or a small well limited cluster of glands persists obstinately after other manifestations of scrofula have disappeared." Operations upon larger clusters of glands, even where the individual tumors appear quite free, are often exceedingly dangerous. The glands are found on exposure to be less movable than they appeared, to extend deeply, and put in danger the great vessels and nerves or the dome of the pleura if obstinately pursued with the knife. He further says, " Extensive operations of this kind appear to me to be rarely justifiable." Of course Mr. Treves prefers his own cautery-puncture, which, he says, is an admirable method of treatment for large softened glands superficially placed. He also advocates scraping out diseased glands where sinuses exist, and advocates the opening of strumous abscesses and other collections of pus in the glands by cautery-puncture.

I cannot agree with Mr. Treves in his remarks on excision of glands of the neck. My colleagues and I, at the Montreal General Hospital, have frequently removed numbers of scrofulous glands from the neck with the best results. The patient has always borne the operation well, and has rapidly improved in general health afterwards. We have never had any bad results follow, or any accidents occur during the operation, although in some cases the dissections were most extensive. Having never employed cautery-puncture, I cannot speak from present experience, but I should fancy that in the treatment of deep-seated glands its use would be much more dangerous than the knife.

Treatment of Aneurism by the introduction of Steel-wire into the Sac.—Last February Dr. Cayley brought before the London Medico Chirurgical Society a case under his care, in which Mr. Hulke had introduced 40 feet of steel wire into the sac of an aortic aneurism, with the result that the portion of tumor acted upon became solidified. Three important points were established by this case: 1, That the introduction of foreign substances into aneurisms is usually easy. 2, That, so far as present experience goes, this proceeding appears to involve very little danger when it is carefully carried out. 3, That only nine cases in which this operation has been performed have yet been published, so that our experience of it is far too limited to warrant any conclusion as to its real value.—(*Lancet*, July 17th, '86, p. 120.)

In the number of the *Lancet* above alluded to is a very interesting report of a case of aneurism in St. Bartholomew's Hospital under the care of Mr. Howard Marsh. The aneurism appeared to be one of the carotid, just as it emerges from the chest. After consultation, distal ligature was proposed and agreed to. Mr. Marsh operated on December 19th, 1885, and tied the carotid on the level of the cricoid cartilage. He divided it between two kangaroo tendon ligatures. On dividing the vessel the lumen was found entirely filled with a firm clot adherent to the arterial coat and apparently of some age. The healing of the wound progressed favorably till the 21st, when the patient was suddenly attacked with difficulty of breathing.

Later on he grew worse, his face became dusky, and he seemed in a dying condition. On being propped up, however, he seemed to breathe more easily, and his condition improved. The swelling at the root of the neck increased, and it was determined to introduce some foreign body into the sac. On the 10th of March, having selected a point a little removed from most prominent part, where the skin was unaltered, he passed a fine trocar and canula about an inch and a half into the aneurism sac and then withdrew the trocar. No flow of blood followed. A fine probe was then passed through the canula for a distance of fully three inches ; it entered readily, but still no blood escaped. He endeavored then to pass some horse hair, but could not do so. A probe was introduced again, and was felt to be moving round in a cavity, but still no blood escaped. The canula was now withdrawn. No bad result followed the operation. Some time afterwards a small abscess formed in front of the aneurismal sac, which was opened. Through this the aneurismal wall gave way, and the patient died five days subsequently of hemorrhage. At the post-mortem, a large aneurism of the arch of the aorta, involving the lower part of the carotid, was found. Mr. Marsh remarks, in connection with this case, that there is always great *primâ facie* probability that an aneurism at the root of the neck will prove to be connected with the aorta rather than with that of the vessels which are derived from it. In this case, distal ligature of the carotid was useless, because the vessel was already occluded. The canula and trocar never fairly entered the blood-stream, but evidently became entangled in clot ; this, of course, prevented the introduction of the horse-hair.

Splenectomy.—At a meeting of the Royal Medico-Chirurgical Society, held in April last, Mr. Knowsley Thornton read a paper on two cases of splenectomy (*Lancet*, April 17th, 1886). This paper contained a detailed record of a case of splenectomy for cystic spleen in a girl aged 19. The pedicle was ligatured with silk and the ligatures cut short. The operation was performed with full antiseptic precautions. The patient made a complete recovery, and is now in better health than before the operation. Another case of splenectomy for hypertrophy of the spleen was also related. In this case there was retraction of a small artery from the middle loop of the three ligatures, with hemorrhage into the omentum and remarkable general oozing, and cyanotic condition of the patient, who apparently rallied from the operation, but died from internal hemorrhage in five hours and a half. Tables of 11 successful and 23 unsuccessful splenectomies, with 4 successful partial splenectomies, were appended, with remarks on the causes of success and failure. All the cases in which leukæmia was present were fatal, and operations under these circumstances are, the author contends, unjustifiable. Credé had collected most of the cases in von Langenbeck's Archives. Splenectomy for hypertrophy of the organ was not so favorable for operation as wandering spleen and cystic disease of the organ. Mr. W. Haward's case had been included in the table ; it happened in 1881, and was one of leukæmia. So far as he knew, the girl was now in a good state of health, and menstruating normally ; as a house and parlor-maid, she performed a fair amount of hard work. In one of the successful cases the woman bore a child after the operation. In another case, the woman was in good health nine years after the splenectomy.

Mr. Thornton stated that it was interesting to observe that in his successful case the girl acquired an enormous appetite ; also, that the reason that operations for leukæmia were so unfavorable was that the blood in these patients coagulated with great difficulty, and there was a proneness to hemorrhage. The President, Mr. Pollock, narrated a case of a man who died two days after a large hemorrhage into the legs.

Successful Nephrectomy on a patient of 23 *months.*—Dr. Rosswell Park of Buffalo reports the case. (*Medical News*, May 22nd, 1886.) The right kidney was removed, exhibiting fibro-cystic degeneration. The operation was performed by abdominal section in right linea semilunaris. Child made a good recovery. Dr. Park remarks that his patient is the youngest who has ever survived nephrectomy. The abdominal incision was not made from choice, but necessity, the tumor being altogether too large for removal in any other way.

New and Original Method of Dressing. —Dr. C. W. Strobell, in the *New York Medical Record*, June 26, 1886, has devised a new and certainly original method of dressing. He surrounds the wound with a thin glass globe so constructed as to fit closely to the part, and provided with openings for drainage tubes. The advantages are that the wound can be looked at without removing the dressings; that it is isolated from sources of infection, as the globe can be hermetically sealed, etc. The author gives no less than seventeen reasons, for which I have not room here, why this method of dressing should commend itself to the profession.

Treatment of Orchitis and Epididymitis.—Mr. Fred. W. Lowndes (*Lancet*, July 24th, 1886) says that the practice suggested by Mr. Furneaux Jordan he has found most beneficial, and has followed it for the last eleven years. The affected testicle is painted with a strong solution of nitrate of silver (two drachms to one ounce), at the same time rest in bed is strictly enforced, and the inflamed organ is supported on a pillow to prevent it hanging down. When the patient is obliged to follow his occupation, the cure is slower, as complete rest cannot be obtained by suspensory bandages, etc.

Enucleation of Eyeball, with Transplantation and Reimplantation of Eyes.—Dr. C. H. May (*Medical Record*, May 29th, 1886) gives an interesting account of this operation. The operation was first performed by Dr. Chibret, 4th May, 1885, when the eye of a rabbit was put into the orbit of a girl æt. 17, from whom the eye had just been removed for disease. The operation was a failure. Next, Mr. Terrier performed transplantation June 15th, 1885; sloughing of cornea resulted on the third day. M. Rohmer performed the third transplantation June 22nd, 1886; the cornea sloughed on the seventh day. The next transplantation was performed by Dr. H. W. Bradford of Boston (*Boston Med. and Surg. Journal*, Sept. 17, 1885). He sutured the remains of the optic nerve of a patient to the optic nerve of the rabbit's transplanted eye. On the 18th day "conformation and tension was good, cornea clearing, and allows iris to be seen; ocular movements in all directions good." M. Terrier performed a second operation, Oct. 19th, 1885, after

Dr. Bradford's method ; the operation was a failure. So out of five cases four were failures. In four, rabbit's eyes were used, and in one a dog's eye. After giving a summary of the results obtained, with a study of the changes taking place in the transplanted organ, the author describes a number of experiments (24) of transplantation of eyes in rabbits, of which a full report is given, and to which I refer the reader. In many cases the cornea, which was clear up to the 15th or 16th day, sloughed on exposure to light.

Treatment of Angioma.—Dr. R. Campana has found multiple punctures, followed by the application of lint and dried perchloride of iron, of great service in the treatment of small capillary angiomata. For 24 hours after the operation there is a superficial reaction in the form of an erythema, but by the second or third day the part treated becomes pale. If one operation is not sufficient, it is to be repeated. In one case of angioma cavernosum upon the face of a child, he effected a cure in one month by galvano-cautery.—(*La Salute*, 1885, Nos. 9 and 10; quoted in *Jour. of Cut. & Ven. Diseases*, April, 1886.)

Treatment of Clubfoot.—Mr. Robt. W. Parker (*Brit. Med. Jour.*, July 3rd, 1886) writes an interesting paper on the above subject, and gives a brief abstract of the anatomy of club-foot. He, in conjunction with Mr. Shattock, made a number of dissections of club-feet, mostly in still-born children, and came to the conclusion that the deformity was not caused by paralysis or a spasmodic contraction of certain muscles, for after all the muscles were removed the deformity would persist, and could not be overcome till some of the ankle and tarsal ligaments had been divided. The neck of the astragalus generally, but not always, had an exaggerated inclination inwards and upwards. The ligaments chiefly at fault he found to be those placed on the inner border of the deformed foot, viz., the anterior portion of the internal lateral ligament of the ankle joint, the astragalo-scaphoid and calcaneo-scaphoid ligaments, all three being blended into one indistinguishable capsule of great strength. These ligaments being the chief cause of the deformity, he advocates their division. The chances of relapse are lessened, and the time necessary for rectification of a severe talipes much shortened by division of these ligaments. The ligament most needing division is quite subcutaneous, and extends from the tip of the internal malleolus across the astragalo-scaphoid articulation, on to the internal cuneiform bone, and loses itself in a fibrous expansion on the fore-part of the inner border of the foot. The extent and direction of the fibres which chiefly oppose rectification of the foot can be felt with the finger-tip when traction is made on the inverted foot. A curved tenotome is entered immediately in front of the anterior border of the internal malleolus, the blade being kept between the ligaments and the skin, and the cut made by turning the knife against the ligament and cutting till all resistance ceases—in fact, till the bone is reached. The foot is placed in a plaster boot, which is left on for a week or ten days, and after this, manipulation, etc., may be commenced. Mr. Parker does not pretend that this treatment cures club-foot any more than tenotomy, but he holds that with proper after-treatment it hastens rectification. He does not think division of the tendons is needed in all cases.

Correspondence.

NEW YORK, Aug. 16, 1886.

It would seem that the new code, or no code, party find that the removal of all restraint and allowing each individual to act in accordance with his conscience, has not had that beneficial effect in elevating the moral and ethical standard of the members of the profession which they predicted it would have. Because baulky and vicious horses often take the bit in their mouth and bolt, in spite of checks and reins, the members of the stated party arrived at the conclusion that horses, in general, would go better if all checks and reins were removed and the animals permitted to go at their own sweet will. A short experience of this method seems to have been sufficient to reveal the fallacy of this reasoning. The readers of New York journals will well remember that the fight between the two code parties had to be fought out in the conservative and dignified Academy of Medicine, notwithstanding that a great effort was made by the leading members on both sides to keep that body free from the dispute. The contest ended in a victory for the no-code party, which they signalized by electing, by an unheard-of majority, one of their leaders president, and by abrogating all clauses of the Academy relating to ethics and removing all power of discipline over its members. To quote from a correspondent to the *Journal of the American Medical Association*, "as there is nothing whatever in the regulations of the Academy of the faintest ethical import, it is evident that a fellow can be suspended or expelled for a breach of certain routine rules solely. He may be a debauchee or sot, a blackleg or a thief, but so long as he acts in accordance with these 'regulations' the Academy cannot touch him, and if it attempted to do so, the defence that he had not violated the regulations would hold good in any court of law. There is not even the saving clause of 'conduct becoming a gentleman' anywhere to be found." Recent experience bearing on this point has influenced the Academy in amending its constitution. At a meeting held June 3rd, article 8, section 1, of the constitution was amended to read: "The Academy may suspend or expel a fellow for violation of its regulations, or the commission of any act which unfavorably affects the character of the medical profession or the interests of the Academy."

Although the summer, so far, has been unusually cool and pleasant, the rate of mortality among children has been much higher than preceding years. This increase of mortality is due chiefly to a hitch between the Board of Apportionment and the Board of Health. Hitherto the Board of Health appointed a sanitary corps of fifty physicians, whose duty it was, for the remuneration of $100 a month, to visit the tenement houses and prescribe for the ailments of children whose parents were unable to pay a fee. The Board of Apportionment refused this year the allowance of $10,000 to cover the expenses of the sanitary corps of physicians. They allege as a reason for their refusal the extravagance of the Board of Health and the number of sinecure offices under its administration. If the Board of Health, they say, would practise a little economy, its present allowance ($170,000) would be sufficient to cover all necessary expenses, including that of the sanitary corps of physicians.

Your city may find that consolation which companions in distress feel, in the fact that here in New York there is an anti-vivisection party evidently organized for the sole purpose of satisfying the uneasy consciences of a few perverted sentimentalists who have not sufficient moral strength to endeavor to allay the human suffering and misery that exists, but who pour out their overflowing benevolence in hampering the honest efforts that are made to benefit mankind. As the eminent head of this party has recently been giving utterance to remarks disparaging to vaccination, it may be that, ere long, this city will meet with the same difficulty in averting recurring epidemics of smallpox that Montreal so sadly experiences.

Another of New York's great medical men has passed away. Dr. Frank H. Hamilton, well known by your readers through his classical treatise on fractures, died on the 11th inst. from pulmonary disease of some two years' standing. Dr. Hamilton was born in 1813, at Wilmington, Vt. He was graduated at the University of Pennsylvania in 1833, and began practice in Auburn, N.Y. After trying his fortune in a couple of other towns in the State, he removed, in 1844, to Buffalo, where, in conjunction with the late Dr. Flint and the late Dr. White, he was largely instrumental in building up the medical department of the University of Buffalo. In 1862, Dr. Hamilton came to New York, having previously been appointed professor of surgery in Bellevue Hospital Medical College, a position which he resigned in 1875. During the war of the Rebellion, he served in the medical department in the army, and rose to the rank of medical inspector. He was one of the consultants in President Garfield's case, and, in conjunction with Drs. Agnew and Bliss, was almost constantly in attendance. Besides the treatise on fractures already mentioned, Dr. Hamilton was the author of a work on military surgery and a general text-book of surgery. His other writings, though not numerous, possess a substantial worth, and are written in a clear and attractive style. Notable among these are two that appeared in the *New York Medical Journal.* "The Asiatic Cholera as it appeared at the Suspension Bridge, Niagara County, N.Y., in July, 1854, and its

Lessons; what we know of Cholera" (*N. Y. Med. Journal*, Nov. 15, 1884), and a paper entitled "Dislocation of the Head of the Radius downward, by Elongation" (*N. Y. Med. Journal*, Jan. 3, 1885). The deceased was a member of the American Medical Association, of the Medical Society of the State of New York (of which he was president in 1885), of the New York State Medical Association, and of the Society of Medical Jurisprudence and State Medicine. At the time of his death he was one of the surgeons to Bellevue Hospital and a consulting surgeon on the staff of several institutions.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

UNDER THE CARE OF DR. F. J. SHEPHERD.

Compound Fracture of outer table of Frontal Bone—Pneumonia—Recovery.

(Reported by DR. H. S. BIRKETT, House-Surgeon.)

Wm. B., aged 30, sailor, admitted to hospital 28th May, 1886, suffering from injuries to head and left hip. The same morning, whilst working on a vessel, patient tripped and fell down the hatchway to the hold, a distance of 30 feet, striking on the left side of his head and left hip. On admission, his condition was as follows: Quite conscious; no paralysis or anæsthesia; pulse 80, full and regular; respirations 18, unembarrassed; pupils equal, and respond to light.

On examination: A strong, tall, well-built man. A wound $2\frac{1}{2}$ inches long is found on the side of the head, beginning half an inch above and behind angular process of left frontal bone, and extending directly backwards and upwards. This wound communicates with the outer table of the frontal bone, which is fractured into four or five narrow pieces. These are not detached, but kept in place by bands of periosteum. The wound was well cleaned with bichloride (1–1000), a drainage-tube introduced, and edges brought together by catgut sutures. Dry dressings; ice-bag applied. Examination of hip shows only evidences of severe bruising.

The next day patient was partially delirious; unable to retain anything on his stomach; no pain in head; pulse 108, weak and shabby. Every eighth respiration is a long-drawn inspiration, followed by a cough, with expiratory act. Temperature 98½°. Retention of urine, which was relieved by catheterism three times a day, this condition continuing for fifteen days, at the end of which time he passed his urine naturally. Urine presented no abnormal features, except being covered with a very fine, thick froth. Patient was ordered champagne and morphia hypodermically when required. His condition remained unchanged for two days, at the end of which time he became quite rational. No pain in head. Pulse 84, and of good volume. Respirations 20, unembarrassed and natural. Temperature 98½°. Wound has united well; no swelling; no suppuration. Tube removed and dry dressings applied.

Five days later, patient developed pneumonia, which involved the whole area of right lung, and by the 30th June was quite convalescent and allowed to get up. From this time until exit (19th July) the progress of the case was one of continued improvement, the wound having become perfectly healed, no head symptoms, and patient gained much in weight and strength.

Remarks—The interesting question arises here as to the cause of the pneumonia. Was it septic? The extensive wound of the frontal bone was always aseptic, and healed, except at point of drainage, by immediate union.

Compound, Comminuted and Depressed Fracture of Skull, followed by Epileptic Fits—Recovery.

(Reported by DR. H. S. BIRKETT, House Surgeon.)

J. D., aged 28, carter, admitted to the hospital on 8th June, 1886, suffering from injury to head. On this morning, whilst driving a horse, the animal shied at a passing engine, throwing the patient over the dashboard to the ground, and before he had time to get out of the way the horse kicked him on the head. Patient, after the injury, got up without assistance, and wished to continue his work, but was brought to the hospital instead. On admission, his condition was as follows: Patient is a strong and healthy looking man. Complains only of a cut in his head.

Has no pain in head ; no vomiting ; gait perfectly natural ; vision normal ; sensation and muscular power quite intact ; pupils active and equal ; no dizziness ; no confusion of mind, gives a perfectly connected history of the accident.

On examination, a clean cut wound, 3 inches long, is found on the left side of the head, beginning at posterior fontanelle and extending downwards and forwards to parietal eminence. The wound communicated with the parietal bone, which is found to be broken into two irregular pieces, both fragments together corresponding in length to that of the wound itself. The fragments are depressed, and the inner riding on the outer one. No protrusion of brain substance. No hemorrhage. The wound was thoroughly cleansed with bichloride (1–1000), edges brought together by silk sutures, medium-sized drainage-tube introduced, and the wound dressed with iodoform gauze and jute—all kept in position by a firmly applied bandage.

About an hour after the dressing had been applied, patient was seized with a convulsion, which came on without any premonitory symptoms, and lasted a minute and a half, during which time his condition may be described as follows : Both upper and lower extremities were in a state of extreme flexion ; the muscles clonically contracted ; body bent to right side, resting on hip and side of head ; head also flexed and partially bent under body ; lower jaw firmly set, but accompanied with grinding of the teeth ; pupils contracted to a pin's point, and insensitive ; respirations hurried, and at one time ceased for five seconds, at same time radial pulse lost for a similar period, and during which time patient became markedly cyanotic. Froth exuded from the mouth ; was quite unconscious ; no involuntary evacuations. The bandage was immediately cut and dressings removed, and in a few seconds patient's condition was as follows : Is quite conscious ; complains of severe frontal headache ; is very restless, tossing and rolling from side to side ; pupils dilated and sensitive ; sensation and muscular power intact ; still grinds his teeth ; tongue slightly bitten on both sides ; no vomiting. Ordered ʒss doses of potassium bromide every four hours per rectum, as patient was unable to retain it on his stomach. The wound was dusted over with iodoform, and a piece of antiseptic gauze and ice-bag applied.

For the next ten days the case progressed very favorably. Complained of no pain in head; no tenderness on pressure; slept well, and took nourishment very well. The wound had well united. The drainage-tube daily shortened, and removed on the tenth day; no suppuration; temperature ranging from 98° to 99°. On the 19th June, the wound took on a slight erysipelatous action, and patient was immediately isolated. Hot lead and opium applied to wound, and iron given internally. Temperature 102½°. The case subsequently progressed very favorably, heat, redness and inflammatory signs rapidly disappearing; temperature fell to 99° on the second day after removal, and remained normal until patient's exit (5th July), when his condition was as follows: Enjoys excellent health and looks well; small sinus, 2 inches long, at lower end of wound, into which a probe, when passed, detects small piece of bone, which seems to be becoming covered over with granulations. Has no paid in the head; no tenderness upon firm pressure over seat of recent injury.

Remarks.—The interesting points in this case are the great degree of injury which took place without motor or sensory disturbances and the occurrence of convulsions on the application of a dressing which, pressing on an already depressed portion of the skull, caused just sufficient irritation to bring on reflex spasms, which ceased almost immediately on removing the bandage and dressings. In this case no surgical interference was felt to be justifiable, as no symptom of compression or irritation were present when admitted, and when the convulsive attack came on, as immediate relief followed the removal of the dressings, the case continued to be treated expectantly. It will be interesting to watch the after history of this case.

Enlarged Prostate, with Retention of Urine—Catheterization, Urethral Fever—Recovery.

(Reported by DR. H. S. BIRKETT, House Surgeon.)

B. McI., aged 65, carter, admitted to hospital 28th April, 1886, complaining of inability to pass his urine. On the 26th, patient took cold from exposure, and upon awaking next morning found that he was unable to pass a drop of urine, though the desire to do so was very great. He complained of severe pain in the hypogastrium, in the region of the bladder, also in the perineum and along the whole course of the urethra, attended with rectal and vesical tenesmus. The urine could only be passed by drops, and the act was accompanied by a great deal of straining. In this condition patient went to a hospital, where attempts were made to pass an instrument, but without success, some slight hemorrhage following these attempts. He then went to Dr. Roddick, who successfully drew off his urine, and again on Tuesday morning and evening. The urine drawn off had the same characters as it has at present (28th).

Upon admission, patient complained of inability to pass water, sometimes a few drops being passed, attended with great straining, of pain over the hypogastrium, in the perineum, and along the whole course of the urethra, with great rectal and vesical tenesmus. Upon introducing a catheter, about ℥xx of urine were drawn off, with great relief to the patient. The urine had the following characters : Dark-red in color ; heavy deposit of mucus ; few blood-clots seen ; strongly urinous odor ; acid in reaction ; specific gravity 1024 ; 15 per cent. of albumen ; no sugar. Microscopically, numerous red blood-corpuscles and bacteria termo are seen. Patient is a man of average height and weight, and fairly well nourished. Temperature 98° ; pulse 84. Upon examining the prostate, the right lobe, but more especially the middle, is found to be enlarged, and very painful and tender to the touch. Previous history : Patient had an attack similar to the present one two years ago, the symptoms complained of and the character of the urine being the same as the present attack. The cause was exposure to cold. The treatment consisted in catheterization, hot hip baths, and poultices to perineum. Patient is temperate in his habits. At nine o'clock the same evening, drew off ℥xviii of urine, the same in character to that above described.

April 29th.—At 6.30 and 11.15 a.m., drew off ℥xvi and ℥xii of urine respectively. Patient ordered Supp. Morph. Sulph. gr. i and Amm. Bromidi, gr. xx ; Tr. Hyosciami, ʒss ; Inf. Lupuli, ℥ii ; Inf. Uvæ Ursi, ℥i. 5.30 p.m.—℥vi of urine drawn off, of same character. Patient feels easier and more comfortable. 30*th*—Urine ordered to be drawn off three times daily.

May 1*st*—No change in patient's condition ; the bladder to be washed out daily with weak solution of carbolic acid. 8 p.m.—Patient found to be somewhat delirious ; talks incoherently at times, rambling on various topics ; will persist in getting out of bed. Occasionally will answer questions directly put to him. Temperature 104.5° ; pulse 100. Urine drawn off. 11 p.m.—General condition much the same ; complains of no pain. Temperature 103° ; pulse 94.

May 2nd.—Patient more rational ; pain not so severe. Temperature 99° ; pulse 84. Urine same in amount, but much clearer ; small deposit of blood.

May 3rd.—Patient's general condition much improved and quite rational. Passed his urine himself, attended with only little pain and slight straining. Urine is clearer ; no deposit of blood ; quantity increased. Pain in the perineum and along urethra less severe.

May 5th.—General appearance and condition of patient much improved. Passes water freely and without pain.

May 7th.—Patient continues to improve. Catheterization being done three times daily, and bladder washed out daily with weak carbolic solution. Urine quite clear and of normal odor. Prostate gland less swollen and not painful or tender. Bowels regular ; appetite good, and sleeps well.

Remarks.—This case exhibits well the symptoms of urethral or " catheter" fever in an old man with enlarged prostate, who, for the first time, was regularly catheterized. The period of entrance upon " catheter life " in such cases is always an anxious one, and the necessity of rest in bed at the commencement cannot be too strongly insisted upon. The cause of the attack in this man, as in so many others, was exposure to cold.

Society Proceedings.

CANADIAN MEDICAL ASSOCIATION.

FIRST DAY.—AUG. 18.

The meeting was opened at 11 A. M. in Laval University, Quebec. In the absence of the President, Dr. Osler, Dr. Sullivan took the chair.

Moved by Dr. Sheard, seconded by Dr. Sloan, that the following members of the profession be elected members of this Association ; Dr. E. Jenner, Picton, Ont. ; Dr. Rankin, Tavistock ; and Dr. Lunam, Campbellton.—*Carried.*

The only report from the special committees was presented by Dr. Mackay, of Woodstock, on Obstetrics. The paper was read by the Secretary, in the absence of Dr. Mackay.

Moved by Dr. F. W. Campbell, Montreal, seconded by Dr. J. E. Graham, Toronto, that a vote of thanks be presented to Dr. Mackay for his interesting report.—*Carried.*

After some discussion as to whether the regular section work should be taken up before the afternoon, the meeting adjourned at the suggestion of Dr. Sullivan to go through the University, Dr. Marois, of the Laval Medical Faculty, kindly showing the members through the Museum and Library of the University.

WEDNESDAY, 2 P.M.

The President, Dr. T. K. Holmes, in the chair.

The PRESIDENT requested Dr. Cassidy of Toronto, in the absence of the chairman of the Committee on Public Health (Dr. Yeomans of Mount Forrest), to make some remarks upon the recent enactments with reference to quarantine regulations concerning vessels entering the St. Lawrence. These enactments have already been submitted to, and approved by, the Provincial Board of Health of Ontario. The order in council governing these matters was published in the early part of this month. It deals with the restrictions upon all steamships and sailing vessels in the St. Lawrence—at the lower ports, at the station at Grosse Isle, at Quebec, and at all other organized Quarantine ports of the Dominion—and at all ports under quarantine directions of Collector of Customs, also the signals for sickness to be displayed at all ports, the disinfection of rags, the hours of inspection, and the penalties for pilots and all officers and masters of vessels. It was pointed out that the chief points in which the report of the Ontario Board of Health differed from the existing regulations are the following; 1st, That the precautions prescribed in the case of an outbreak of cholera on board ship are insufficient to meet the case, and should be rendered more stringent, as indicated in their report. 2nd, It is advised that the inspecting officer at Quebec require clearance papers from Rimouski or Grosse Isle, failure of which shall lead to the vessel being sent back to Grosse Isle forthwith. 3rd, The amount of the fine imposed ($400) is thought to be insufficient to prevent infractions in the case of wealthy trading companies and a much larger sum ($3,000) is suggested, with imprisonment without the option of a fine for a second offence.

Moved by DR. ECCLES, seconded by DR. CLARKE, "That the Canadian Medical Association, at the annual meeting convened at Quebec, views with pleasure the action taken by the Dominion Government in the issue of the quarantine regulations which have been put in force during the present month. We consider that the prompt and thorough enforcement of the aforesaid regulations will be of incalculable benefit to the health interests of the country; and, moreover, it is our opinion that, 'when intelligently applied,' they are calculated to conserve the best interests of the trade and commerce of the Dominion." *Carried.*

The President-elect, Dr. Holmes of Chatham, then read his Address. (*See page* 65.)

DR. R. P. HOWARD, seconded by HON. DR. SULLIVAN, proposed a vote of thanks for the thoughtful and suggestive address which we had listened to with great pleasure. He did not intend to discuss the various problems which had been set before us. He would only say that the general tenor of the sentiments expressed would no doubt commend itself to the members at large. It was only on one subject that he would make a few remarks, one upon which he differed somewhat from the speaker, viz., that of the preliminary education to be required from medical students. The suggestion in the address is to the effect that this might be extended especially in the direction of the scientific subjects. His own view is opposed to this, believing that the preliminary examination is already too complicated, and not compact or concrete enough. In fact, we might even go backwards with benefit to ourselves. If it were possible, he would favor a general university training. No doubt, if a high standard in medicine was to be upheld, a similarly high standard must be maintained in the matriculation examination.

DR. SULLIVAN does not altogether agree with Dr. Howard. He thinks we are getting on very well. He does not find that, practically, the Arts graduates, as a rule, excel others in their medical studies. Under any circumstances, an examination can be crammed for. The suggestions for improvement or advancement in the examination generally came from the teaching men in the Ontario Council, and not from the members of the general profession. He would also take this opportunity to congratulate the Canadian medical profession upon the progress it had made of late years. For such progress to continue, it was absolutely necessary that the friends of higher education should assist liberally from their wealth. It was, therefore, with great pleasure that he was able to congratulate McGill University upon the handsome endowment they had received from Sir Donald Smith and other public-spirited citizens of Montreal, and he hoped that this fine example would be followed by other donations to Canadian Universities. He cited the case of New York, where, quite recently, princely gifts had been made to certain faculties of medicine. He had been pleased to see Dr. Holmes elevated to the presidency of this Association, and felt sure that the address would be deemed worthy of the man.

The vote proposed was carried by acclamation.

The following new members were proposed by Dr. Lachapelle, seconded by Dr. Sheard, and elected, viz.: Drs. Vallée, Marois and Ahern.

Moved by Dr. Sullivan, seconded by Dr. Graham, that Drs. Sullivan, Geo. Ross and Sheard submit names for election to the Nominating Committee. The suggestion was acted upon.

Moved by Dr. Sheard, seconded by Dr. Geo. Ross, that the following gentlemen constitute the Nominating Committee, and that they meet in this room at 9.30 A.M. to-morrow to transact business without future notice: Drs. Rankin, Tavistock; Sloan, Blythe; Kerr, Winnipeg; Graham and Canniff, Toronto; Ross and Rodger, Montreal; Eccles, London; Lachapelle, Montreal; Marois, Quebec; Smith, Seaforth; Lunam, Campbellton, N. B.; Sullivan, Kingston; Sheard, Toronto; and the President and Secretary.—*Carried.*

The meeting then adjourned for section work.

MEDICAL SECTION—WEDNESDAY, AUG. 18.

The section met at 3.30 P.M., and organized by electing Dr. Canniff of Toronto chairman and Dr. Jenner of Picton secretary.

DR. DANIEL CLARKE of Toronto read an able paper upon "The Medical Jurisprudence of Crime and Responsibility." The following were the conclusions arrived at:—

1st, The natural history of crime shows that brains of chronic criminals deviate from the normal type and approach those of the lower creation.

2nd, That many such are as impotent to restrain themselves from crime as the insane.

3rd, That immoral sense may be hidden from expediency by the cunning seen even in the brutes, until evoked by circumstances.

4th, No man can shake himself free from the physical surroundings in which he is encased.

5th, Crime is an ethical subject of study outside of its penal relations.

6th, Insanity and responsibility may coexist.

7th, Some insane can make competent wills, because rational.

8th, The monomaniac may be responsible should he do acts not in the line of his delusion, and which are not influenced thereby.

9th, Many insane are influenced in their conduct by hopes of reward or fear of punishment in the same way as the sane: the rudiments of free-will remain.

10th, Many insane have correct ideas in respect to right and wrong both in the abstract and concrete.

11th, Many insane have power to withstand being influenced even by their delusions.

Dr. Sherman of Ogdensburg spoke very highly of Dr. Clarke's paper. He himself, it so happens, is often called into court in cases of crime or to give evidence as to the validity of a will when the sanity of the testator is under dispute. He observes that the views expressed by Dr. Clarke upon these difficult questions coincide most closely with those which his own observation has led him to adopt.

Dr. Howard thought the general principles laid down by the reader of the paper could not be made the subject of discussion, for upon them the profession was entirely agreed. These principles and the reasoning upon which they were founded had been ably set forth by Dr. Clarke. It was a matter for regret that the members of the legal profession could not be induced to see the matter in the same light.

Dr. Sullivan was afraid that many alienists still thought differently from Dr. Clarke, bnt he was glad to find that this Association was so unanimous in holding such advanced views upon the important matter of criminal responsibility. Dr. Clarke has shown us the difficulties that lie in the way of making a diagnosis in cases of mental disease, but has failed to point out the remedy. The difficulties are even greater than in organic disease, and younger men would seem to require that experts should lay down some definite rules for them. It is, indeed, a question whether the ordinary practitioner can, or should ever be requested to, give an opinion as to the responsibility of a doubtful individual. He has himself once given an opinion as to the entire sanity of a man who shortly after proved to be quite out of his mind, and who, indeed, subsequently was the author of the tragedy which ended the life of the lamented Dr. Metcalfe of Kingston. The alienists themselves still differed much, and much was required to bring them into line, when it was possible for a well-known superintendent to say, as had occurred recently, that in his asylum all the males were mad through masturbation and all the females through criminal abortion.

Dr. Clarke remarked that no man should hastily decide an obscure case of insanity, *i.e.*, after one or two hasty interviews. Some forms of insanity can be easily diagnosed by the ordinary practitioner, such as dementia, melancholia with delusions, and acute mania ; but in cases of delusional insanity, care should be taken not to draw conclusions too rapidly. If the truth is to be arrived at, the specialist giving evidence should not be upon any side, but should be placed in a strictly independent position. Advanced students now in Toronto have the advantage of practically studying mental disease in the asylum, where Dr. C. also gives practical lectures. Those instructed in this way can back up their opinions upon good pathological grounds. A definition of insanity can never be given. The old legal ground of a capacity to distinguish right from wrong has done untold harm. The only means he knows of by which an opinion can be arrived at is to institute a comparison between the man as he is and his former self, the idea of which is to be obtained by a careful investigation into his past history, habits, etc.

Dr. Howard would not be understood to say that the profession was entirely at one upon all the points alluded to by Dr. Clarke, but merely upon the great general principles, especially the abandonment of the crude test of knowledge of right and wrong. He thought that in all cases an independent jury of experts should be named, men whose position should be free from any leaning to either side, and whose decision would be final.

Dr. Dupuis of Kingston read a paper upon "Diabetes Mellitus."

Dr. Campbell said that his attention had been strongly directed to the importance of temporary glycosuria from a case recently coming under his observation. A gentleman who, during the season, partook largely of strawberries and cream, was examined for life insurance, and refused owing to the presence of a large quantity of sugar in the urine. Dr. C. re-examined him a short time after his diet had been changed, and found it entirely free from sugar. Such cases were not so rare as might be thought.

Dr. D. Clarke alluded to the frequent appearance of sugar in the urine just before and during acute accessions of mania in the insane.

Dr. Geo. Ross said that certain cases of glycosuria—persistent, not temporary, as in Dr. Campbell's cases—required to be carefully distinguished from those of diabetes proper. In the former we might have sugar present in the urine for a great length of time, perhaps for years, and yet the symptoms which characterize true diabetes mellitus not showing themselves at any time. It would seem therefore that there are two distinct pathological conditions, in both of which the persistent presence of sugar in the urine may be a factor— in the one case coexistent with average health, and in the other marked by a peculiar set of well-known symptoms. In his most recent work upon diabetes, Dr. Milner Fothergill devotes special chapters to these quite different disorders, remarking at the same time upon the confusion on the subject that still exists in the minds of many medical men. To emphasize this he relates the history of a case somewhat as follows: A physician in India, examining the urine of a patient, found sugar. Desiring to be certain of his tests, he applied the various solutions to the suspected urine and to his own side by side. To his dismay he found his own urine loaded with sugar. He had been up to that moment in the most perfect health. Uneasy, he returned to England, and was given a strict anti-diabetic diet. His health failed rapidly. After a time he abandoned all attempts at treatment, and resumed his customary diet and habits in every way, with the result of being soon restored to as complete health as he had enjoyed before. Examples of this kind should teach a lesson to be careful in prognosis and in estimating the effect of any medicine or other treatment in any given case.

Dr. Holmes alluded to the liability of those who have been temporarily glycosuric from improper diet to become diabetic. Such persons should always be cautioned against continuing the use of such articles of food for fear of serious consequences ensuing. He thinks that those physicians are most successful in these cases who begin early with a strict dietary and persistently enforce it. Has had some experience of bromide of arsenic, and thinks highly of it.

Dr. Graham thinks we might throw these cases into three classes—viz., 1st, Temporary glycosuria; 2nd, A mild form of diabetes; and 3rd, A severe form. In some cases of the last series medicine and diet have no effect whatever, whilst the milder forms are distinctly amenable to treatment, and are thereby either much prolonged or positively cured. In odd instances a glycosuria will be produced by a certain article of diet, and by that alone; a case of this kind from peaches had come to his knowledge. Thinks bromide of arsenic decidedly beneficial. Whether a coincidence or not, since he had begun the use of this drug all his cases had done well. The last of these he would mention. Two brothers, aged 15 and 22, were severely injured in the same accident; both became diabetic, all the symptoms, when first seen, being very severe. The urine had now diminished from 12 or 14 pints to 5 pints, whilst the specific gravity had fallen from 1045 to 1028, and even that high figure was mainly from an excess of urea, because there was only a trace of sugar present.

Dr. Jenner of Picton, Ont., read a paper upon "Alimentation in Sickness." The writer dwelt chiefly upon the growing importance of dietetics in the management of sick people, giving many examples of the results of neglecting this department in favor of medication with drugs. He thought that the Canadian schools, as elsewhere, did not give sufficient attention to systematic teaching of the principles of dietetics to their pupils.

Dr. Eccles had often experienced difficulties in the way of having food suitably prepared for his invalids. When he thinks it of special importance, he examines the food himself and gives directions for its preparation. We all rely too much upon medicine and too little upon diet. Thinks it often important to insist more upon the systematic, and perhaps frequent, feeding of patients. Persons who are weak should be allowed to take a light supper. To objectors, he points out that animals mostly feed before sleeping. During digestion there is more blood in the abdominal organs and less in the brain, a condition favoring sleep.

Dr. Howard expressed himself much gratified at the thoughtfulness which had produced such a paper. It often requires courage, especially on the part of a young practitioner, to tell people that what they require is sunlight, fresh air, and good food, and not medicine.

Dr. Trenholme hoped that the time is coming when we shall hear much more about diet than in the past.

Dr. Campbell maintained that the subject of dietetics was by no means so neglected as the reader would have us believe. He thought that, at the present day, every lecturer upon practice of medicine felt it a duty to lay stress upon the management of diseased conditions by attention to the dietary.

Dr Canniff said that in the Toronto schools the subject of sanitary science received considerable attention, and the matter of dietetics also held a prominent part in this course.

The section then adjourned.

The section reopened at 7.30 p.m.

Dr. Playter of Toronto read a paper on "The value of Mortuary and other Health Statistics." He alluded to the work already done in this direction, especially in Ontario, but showed that nothing had yet been accomplished to procure complete statistics for the Dominion at large. He urged the importance of having the subject of the collection of statistics constantly brought before the attention of the general government. He requested the Association to name a committee for this purpose.

Dr. J. E. Graham of Toronto then read a paper upon "Contagious Pneumonia."

Dr. Howard said that after 37 years' practice, and after having given a good deal of attention to the subject, it was beyond his experience to have met with such a series of cases as seemed to imply the existence of contagion. He would therefore conclude that there must be, in reality, two forms of the disease, one contagious and the other non-contagious. He thinks that, when we get such groups of cases as those related by Dr. Graham, when pneumonia would *seem* to have been contagious, we are dealing with a disorder in some way different from the ordinary form of lobar pneumonia. We cannot say, this is ordinary pneumonia which has assumed a contagious character owing to the existence of certain peculiar circumstances. If we consider the inflammation of the lungs arising from putrid emanations, we must admit that it is probably not a simple pneumonia, and that much has yet to be learned concerning its exact nature, differing, as it does, in area and in its course from the latter. These clinical features must be remembered even in the face of the evidence adduced from culture experiments, etc. What do the oldest amongst us say? Have they ever seen a case of pneumonia where they considered it proper to secure isolation or disinfection? In cases suggestive of contagion, the greatest care will have to be exercised in instituting an examination into all possible causes for the occurrence of several consecutive cases apart from an origin by direct communication. It is quite possible that sometimes an entirely different explanation may be arrived at. He would remark that in Dr. Graham's cases the consolidation was patchy. This is quite exceptional in ordinary lobar pneumonia, although frequently seen in septic cases. The relation of this disease, as well as others, to a microscopic organism is as yet by no means positively determined. Culture experiments afford very strong evidence of the bacteria being the real originators of the disease, but there remain still some debateable points which must be overcome before the doctrine can be considered definitely entertained.

Dr. Geo. Ross said that, although seeing a large number of cases of pneumonia every year, he had not met with any such series of cases as necessarily suggested the association of the latter of these with the first by contagion. He knew of Dr. Wilkins' cases alluded to by the reader of the paper, and admitted that they gave strong support to the idea of contagion. It seemed to him that the extreme rarity of any such groups of cases tended to preclude the possibility of such a common disorder being contagious. If this arose from special surroundings, was it not singular that with hundreds of such cases passing before us, it should only be the lot of one physician at long intervals to meet with examples of its propagation in this way. What peculiar conditions can we think of which would act in this way? If ever contagious, should not this property be manifested oftener? He would rather be disposed to consider that in these localized outbreaks we are really dealing with an affection differing in some essential way, as yet unknown, from the common lobar pneumonia.

Dr. Gardiner of London had met with a series in one family which seemed to fall within the category of the contagious. The first patient, aged 20, contracted pneumonia. The mother suffered from chronic bronchitis. She soon fell ill with the pulmonary inflammation. A third member of the family and a grandchild sleeping in the same room were both prostrated by pneumonia within a few days. The only other possible explanation seemed to be a very strong family tendency acted upon by an exciting condition to which all were equally exposed.

Dr. Foster of Portland, Me., said that in 1872 they had an epidemic of pneumonia in Portland. A singular feature which he had observed in these cases was that in nine out of ten cases the consolidation affected the apex of the left lung. In about one month they had probably 50 such cases. The course of the disease was unlike ordinary pneumonia, and also unlike typhoid fever. In one locality 20 cases occurred. As Medical Health Officer he was called upon to investigate the occurrence. On tasting the water supplied there, he found a disagreeable flavor, reminding one of clam-water. He found that this water was supplied to the greater part of the infected district and came from a deep well, being clear and cold. About ten rods above the well were a row of privies,—a main sewer leading from these was traced, and found to have burst and caused the entire soil intervening between it and the well to have become infiltrated with foul matters. The sanitary defects were immediately remedied, the use of the water forbidden, and the outbreak at once ceased. Another endemic he had witnessed also bore upon this discussion. A young boy died of pneumonia in the almshouse after an illness of only two days. Within forty-eight hours they had thirty cases, the consolidation involving either the whole lung or spots in the lung. He found that extensive repairs had been making in the sewerage and pipe-system of the establishment and to this he attributed the outbreak. The cases were treated by an emeto-cathartic at the outset, followed by iron and quinine, and no more cases were lost. He looked upon cases of this kind as being of the nature of some peculiar lung disorder, resulting from blood-poisoning. He has been thirty years in practice and has never seen a case of pneumonia which he had even suspected of being originated by contagion. During the outbreak he had noticed that the nurses and attendants were never attacted.

Dr. Cassidy of Toronto remarked that the true etiology of pneumonia was still very obscure. It occurred alike in the houses of the rich and in the poorest hovels. Wherever contagion is thought of we must beware of coincidence which may mislead oftener than we think of. The general causes predisposing to pneumonia are of great importance to the sanitarian, because they are remediable. It has been observed in armies that the men in the barracks have sometimes suffered a large mortality from pneumonia, whilst those in the open air have entirely or almost entirely escaped, and when removing from close barracks to open tents, the disease had completely ceased.

Dr. Graham, in reply, said that the patchy character of the consolidation did not apply in his first case. He would admit in his series a difference of type, but no pathological difference. The doctrine of the unity of pneumonia receives strong support. Sternberg has found the same parasite in normal saliva as in malignant erysipelas and in pneumonia. If so, the disease is determined not so much by the parasite as by the soil in which it grows. Dr. G. would still look upon all the pneumonic cases as belonging to the same disease—the first case of a series being an ordinary pneumonia, other cases following it simply because the *materies morbi* finds unusually suitable soil in which to propagate and increase. Those who have experience with the work of developing cultures in the laboratory know that it is a very difficult matter to find a soil upon which certain bacteria will grow at all. An example of this might be given in the microorganism of chloasma, the microsporon furfur. Dr. Klein searched a long time for a congenial soil, all the commonly employed substances turning out failures. Many bacteria also permit of only a very narrow range of temperature. If this vary within 5°F. they die. The question, "what is the cause of ordinary pneumonia?" yet remains unanswered. A predisposing condition of the system is no doubt necessary. In Dr. Foster's cases, the polluted water may have so disturbed the system of those using it as to play the part of predisposing cause.

Dr. J. H. Gardiner of London then read a paper on "The Inhibition of the Heart in Diphtheria" The striking features of the cases related were the marked slowing of the pulse, followed, in two instances, by fatal syncope.

Dr. Graham had no doubt that the heart failure here was due to a poison acting upon the nervous centres. Recent discoveries pointed to the development of poisonous substances in ways not yet thought of, as, *e.g.*, in normal urine, and in the formation of ptomaines. In diphtheria, poisons may form and be reabsorbed. It is quite possible that even in tetanus, which was alluded to by the writer as opposed to this view, the same thing might oocur. In some way not yet understood, a peculiar chemical substance might be produced, having an attraction for the spinal cord, and acting as an irritant upon it.

DR. GEO. ROSS said that the theory last mentioned seemed the one best calculated to explain the occurrences. He would, however, caution against always attributing a sudden syncope after diphtheria to a central impression. When preceded by inhibitory symptoms, as in Dr. Gardiner's cases, there appeared no reason to doubt this explanation, but he had met with sudden fatality during the convalescence from this disease, where the autopsy showed clearly that the destructive change consisted in extreme fatty degeneration of the heart. Here there had, however, been no symptoms whatever, the pulse remaining at the normal rate· The possible existence of this structural change was another reason why every precaution should be taken during the period of convalescence.

SURGICAL SECTION—AUG. 18.

Dr. Fenwick of Montreal in the chair.

DR. DESJARDINS of Montreal read a paper on "Keratoscopy as a means of Diagnosis in Astigmatism." After defining the term astigmatism, and stating that errors of refraction affect the vision injuriously though the optic nerve be healthy, he said it was formerly supposed that the fault was in the lens, but it is now known to be due (as first pointed out by Donders) to the curves of the cornea. The lens, according to later investigations, partakes of the same deformities as the cornea. Accommodation is not without influence on refraction. After mentioning that corneal abnormalities are detected by the keratoscope, Dr. Desjardins exhibited and described this instrument of simple construction, made by De Wecker and Maxillor, by which the meridians and amount of astigmatism can easily be determined. Many cases of slight astigmatism can be rapidly detected and suitable glasses prescribed. By the aid of this instrument one scarcely need subject the patient to a subjective examination, and for this reason the author finds it especially useful for children.

DR. JAS. BELL of Montreal read a paper on "Tracheotomy in Membranous Laryngitis," in which he advocated dispensing with the tube in the after treatment of tracheotomy. He said that the methods of stitching the cut edge of the trachea to the neck wound and the use of the canula had proved of but little benefit in actual practice. He preferred late to early operation—1, If patient operated on early, many would be operated on unnecessarily; 2, Extension of membrane took place more rapidly after operation; 3, If the obstruction is not rapidly produced, membrane is separated and expelled. The recoveries after early operation were 25 to 33 per cent.; after late operation, 5 to 10 per cent. A greater percentage recover without operation. He next entered upon the question whether the extension of membrane was due to local or general causes, and thought that the weight of opinion is that extension is due to purely local causes and gave a number of cases illustrating this point. After discussing the subject as to whether or no diphtheria was primarily a local disease, he gave his reasons for not liking the tube in tracheotomy—1, The tube never accurately fitted; 2, When the tube is in its place the incision into the trachea cannot be kept under observation; 3, Occasionally the tube from not being in the middle line and being left too long in the trachea ulcerates through, and an artery is occasionally opened; 4. When the tube is in the trachea there is difficulty in expelling through it pieces of membrane; 5, The tube sometimes causes exuberant granulations and warty growths. In place of the tube, Dr. Bell has devised an instrument which he thinks does away with the objection to the tube. It consists of a pair of "clips" which catch the edge of the trachea and hold it apart. These "clips" are held in position by a tape which goes round the neck. He had experimented with these "clips" in a number of dogs and found that they held well and that no ill results followed. In speaking of the place of operation, Dr. Bell stated that he preferred the low operation because there was more room and also because by it we get further away from the disease. In the after treatment of cases in which the "clips" are used he withdraws the mucus from the trachea by means of a glass pigett. He said he did not believe in the close camp bed which is now so often used, but preferred a free current of air. After operation he plugged the trachea or larynx above the wound with an antiseptic sponge; this absorbed the discharge and helped to localize the membrane; over the wound he keeps a piece of gauze and he occasionally introduces vaseline into the trachea. When the tube is used, after two or three days the breathing becomes dry and the end of the tube becomes coated with inspissated mucus, below this, in the trachea, is a cone of dried exudation which helps to block up the passage. Dr. Bell gave the histories of two cases of diphtheria in which he had operated and used his "clips." One child died and the other, aged 25 months, recovered. In nine cases of tracheotomy in which he used the tube all, with one exception, died. He summed up by saying that the excessive mortality after diphtheria was due to defect in the after treatment. The presence of the tube was a source of irritation and prevented the application of remedies to the trachea itself.

In the discussion which followed, DR. A. L. SMITH said, when House Surgeon to Children's Hospital in London he had a large experience with cases of tracheotomy; he felt that the "clip" introduced by Dr. Bell will prove of the greatest possible benefit and will in all probability reduce the mortality after the operation. He had seen one death from ulceration of the tube into a large vein.

DR. KERR of Winnipeg said he had considerable experience while in Nova Scotia. He had performed tracheotomy twelve times and never had a good result. He did not think that tracheotomy was a good operation and had seen several desperate cases recover without tracheotomy. If Dr. Bell's treatment without a tube reduced the mortality it would be a great gain. Dr. Kerr went on to say that the after treatment of tracheotomy was always a source of great anxiety, the tube was apt to get displaced during a fit of coughing. In his last case he dispensed with a tube and stitched the edge of the cut trachea to the wound as recommended by Post; he did not like this method, for when the patient's chin was depressed the opening closed. He thought that with Dr. Bell's instrument he could do better. As to the question of the general or local origin of diphtheria it was too large a subject to discuss at the present time. He had a case of tracheotomy live three weeks and then die of paralysis, so that it was not always the extension of the membrane that killed after tracheotomy and the best after treatment will often fail to produce a good result. He was very doubtful about the good that would result from plugging the trachea above the wound.

DR. SHEPHERD said that he had performed tracheotomy a number of times both in hospital and private practice, his first ten or a dozen cases were all fatal, but during the last two and a half years he had performed tracheotomy in private sixteen times and had five recoveries. In hospital practice his results were not so good. He thought that the kind of instrument used did not matter much ; it was important that the wound should be kept aseptic, and remove the tube as early as possible—never later than five days. In one successful case he removed the tube on the third day They were all cases of diphtheria. He preferred the low operation, because the trachea was opened at a greater distance from the disease ; there was more room, and it was not necessary to divide the cricoid cartilage. In the high operation, division of the cricoid had to be frequently undertaken, and often resulted in necrosis. Again, stenosis more frequently occured after the high operation. Dr. Shepherd believed that after operation it was useful to have a warm room (75°–80°F), and that the atmosphere should be saturated with moisture—he always used a camp or closed bed, and the steam of the kettle was conveyed into it by a long spout. The inner tube was removed every hour, and the outer one on the second day. Lime-water was occasionally dropped into the tube. He thought that the tube favored expulsion of membrane. With regard to the antiseptic plugging of the trachea, he did not think it of much benefit ; very often the membrane extends at the time of operation below the wound, and if it did not, the continuity of the mucous membrane could not be interfered with. He had never seen the conical plug in the trachea described by Dr. Bell. All the cases of death after tracheotomy he had seen had been due to extension of the membrane. Theoretically, Dr. Bell's instrument was perfect, but it remains to be seen what it would do in practice.

Dr. Russell of Quebec had not seen half a dozen cases of diphtheria in twelve years, but thinks the last year he had seen a great many cases of membranous croup. He thought this disease was more fatal than diphtheria. Was formerly opposed to tracheotomy, but now thought early operation advisable ; if the operation did not cure, it always relieved. He had performed tracheotomy six times, with two recoveries. He thought Dr. Bell's instrument was most ingenious, and likely to prove very useful. In the after treatment he was strongly in favor of using lime-water spray.

Dr. Fenwick of Montreal said that he preferred the high to the low operation. Dr. Bell's instrument appeared to answer very well. Dr. Marshall Hall, many years ago, devised a somewhat similar instrument made of wire. He had seen one of Dr. Bell's cases treated with the " clip " and formed a most favourable opinion of the instrument.

Dr. Bell made a few remarks in reply.

Dr. Fenwick then read a paper on "Treatment of Tuberculous Glands of the Neck." He believed that scrofulous glands were intimately connected with tubercle. After giving a sketch of the history of tubercle and Koch's discovery of the tubercle bacillus he said that there must be some predisposing condition in the individual so that he can contract tubercle, the proper soil must be present. The glands of the neck were specially liable to infection especially the submaxillary and those over the larger vessels. Enlargment is rarely single and occurs generally at first in one side of the neck only, often there are external signs of softening of the glands, but when the glands break down and open externally indolent ulcers and sinuses are left. Very little is known of the mode of extension of the tubercle bacillus. In scrofulous enlargement of the glands of neck the author strongly advised early removal of enlarged glands. After removal the general health of the individual improves; if they are left, the patient runs the risk of general tuberculosis, and if he recovers, it is with impaired health and disfiguring scars in the neck. The author prefers removal to laying open and scraping out the gland or the cautery puncture of Mr. Treves. He related a number of cases in which he had removed large numbers of glands from the neck. In his first case which was operated on as far back as 1873 he removed some half dozen glands from the neck beneath the sterno-mastoid, the scar was now hardly to be seen. Dr. Fenwick showed a number of photographs of cases before and after operation, where the results were most admirable, the cicatrices being hardly perceptible.

Dr. Kerr of Winnipeg said that if we accepted the principle of the identity of scrofula and tubercle, much obfustication would be removed. He was not satisfied with the results of operation, and did not now operate as often as formerly. He found the operation not only difficult and tedious but dangerous, aud the results were not always as good as represented. Dr. Alexander of Liverpool, who formerly operated some twelve years ago very frequently in these cases, has now given up the operation.

Dr. Shepherd confirmed the statement that the results of operations were not always so perfect as were described by the enthusiastic advocates of the operation, but in many cases the results are entirely satisfactory, occasionally there are high temperatures after operation and sometimes an attack of cellulitis. He had operated in a good many cases and had removed as many as 20 to 30 glands at a time. In removing glands apparently solid, they not infrequently come to pieces and are found to be quite soft in centre, and these conditions always complicated the operation. After incising the deep fascia he preferred removing the glands with his fingers and an occasional cut with a knife. He had never had any accidents attending the operations. Although he had had no experience of Treves' cautery puncture, he did not think it suitable for glands deeply placed. In sinuses and scrofulous ulcers he had had most excellent results from scraping out the parts with Volkmann's spoon.

DR. TRENHOLME read a paper on "Some details of Uterine and Ovarian Operations." He says the instruments used in these operations need not be numerous or complicated. After describing the usual precautions that should be taken regarding the cleanliness of hands, sponges, and instruments, he said that he preferred Nos. 1 to 20 shoemaker's thread to any other form of ligature. Before using, the thread should be immersed for twenty-four hours in pure carbolic acid, and not put into water at all. In closing the abdominal wound he used silver wire for the dry sutures and horse-hair for the superficial. He laid great stress on the importance of not enclosing any muscular tissue in the suture. The incision should be midway between the pubis and umbilicus and should not be extended to within 1½ inches of the pubis. He advocated short incisions of 2 to 2½ inches. Muscle should never be cut in the incision as it gives great trouble afterwards. The pedicle of the tumor should be ligated in small segments and the large vessels should be ligated separately and the ligature cut short. The cavity of the abdomen should be thoroughly cleansed with sponges and drained when necessary. He objected to abdominal bandages and has only used them after the largest tumors. He allowed his patient after the operation to move freely in bed, this favors the reposition of the bowels. In uterine fibroids, when large, he always divides the mass in the median line, thus each half was enucleated. The string should be cut in shape of a V, and the edges brought together with a running suture and quilted with the shoemaker's stitch. He had found linseed tea enemata of great benefit after operations, also fomentation to the abdomen. No after medicinal treatment was needed except when there was vomiting; for this he had found sipping hot water useful and also ipecachuana in homœopathic doses; he uses the third dilution..

DR. MACFARLANE of Toronto would have liked to have heard

Dr. Trenholme say more about dietetics. In his operations he had found vomiting to be a very troublesome complication; warm water with brandy he had found of great service in these cases, also frequent small doses of Epsom salts as recommended by Lawson Tait. He never gave medicine at all when there was any threatening of peritonitis. He never used drainage unless the adhesions were extensive.

Dr. Sherman would liked to hear more details regarding the preparation of the patient, also as to whether he referred when speaking of fibroids to extra- or intra- mural growths.

Dr. Macdonald would like to have heard more details as to the closure of the wound, also the value of the clamp in securing the pedicle, and whether operation for ovarian tumors should be performed early.

Dr. Kerr of Winnipeg had seen hernia follow the operation due to failure of union in central portions of wound. Would like to know why Dr. Trenholme objected to enclosing muscle in his sutures.

Dr. Shepherd thought that wounds of the abdomen were much the same as wounds of other parts, and that abdominal surgeons made a great ado about their special methods of healing this abdominal incision. General surgeons, who were operating every day in every part of the body, had no fear of including the muscles in their sutures. He did not understand why abdominal wounds should heal differently from wounds of other parts of body. For his part, in performing abdominal section, he treated his incision as an ordinary wound; used silver or catgut sutures and passed them through the whole thickness of the wound of the abdomen; union invariably took place by first intention. Every gynæcologist thought it incumbent upon him to have some special mode of treatment of the abdominal incision and seemed to think that general surgical principles were inapplicable to it. Dr. Shepherd had not much faith in ipecac used in three dilutions; it had about as much effect as river water.

Dr. Fenwick said he had operated a number of times for ovarian tumour with fair success. He agreed with the remarks of the last speaker, he always used silk sutures and objected to horse-hair, because knots made by it did not hold well. In treating the pedicle he first clamped it and then tied all the large vessels; afterwards he tied the pedicle with the Staffordshire knot and removed the clamp. He had used hot water occasionally to cleanse the abdomen.

Dr. Trenholme in reply said he spoke of interstitial fibroids.

He formed the pedicle out of the lateral borders of the uterus in such a way that he left the broad ligaments to sustain the pelvic viscera. He used the shoemaker's stitch to secure primary union. With regard to the external wound he thought that the conditions found, as the abdominal cavity, existed nowhere else. It was of the greatest importance to secure primary union, so there should be no after hernia. In preparing the patient he avoided purgatives as far as possible. In cold weather he kept the extremities wrapped up in cotton wool.

DR. SHEPHERD next read a paper on "Excision of the Tarsus in Tuberculous Disease of the Bones." He commenced by saying that formerly, when there was carious disease of the bones of the foot, the only resource was amputation, but with the advent of antiseptic surgery, and the establishment of conservative principles of treatment, other methods of procedure have been adopted with success. In cases of tuberculous and carious disease of bone, the necessity for amputation was not immediate, and it was the duty of the surgeon to endeavour first to remove the local disease before sacrificing the foot. It was not necessary to perform a Heys', Chopart's or Symes' amputation in these cases, but more to remove all the disease, however extensive. The reader of the paper illustrated this principle by giving the histories of several cases. In one case where there was disease of both feet he removed, in the right foot, the cuneiform, scaphoid, cuboid, and heads of metatarsal bones, and in the left the lower end of tibia, astragalus, part of the os calcis, and the scaphoid; the patient, a girl aged 17, was able to walk about comfortably. In children it was often sufficient to remove the disease with a Volkman's spoon and in them amputation was hardly ever required.

DR. MACFARLANE of Toronto had followed out the principle advocated by the reader of the paper for years. He believed it was the proper method of treatment and should be extended to caries of the spine: in dressing the wound, he never stuffed with anything but placed the foot in a good position and left the rest to nature.

DR. DUPUIS of Kingston said he recently had a case of disease of all the tarsal bones where he amputated, afterwards the tibia necrosed, and he had to re-amputate. He also reported a case of frost-bite where he removed greater part of tissues.

DR. HOLMES of Chatham remarked that Dr. Shepherd's paper was a good exemplification of conservative surgery. He had several times excised the ankle joint with the best results.

DR. KERR of Winnipeg said that patients after operation should not be allowed to walk about too soon as they were apt to have a splay foot. He did not believe in leaving the wound to nature, but preferred keeping it in an antiseptic condition.

Dr. Russell of Quebec also insisted that the wound should be kept carefully protected, and that antiseptic dressings should be applied ; if the wound was left to nature it would soon become putrid, and all the danger incident to such a condition would be incurred.

Dr. Fenwick said he could mention a number of cases where he had resected the tarsus with the happiest results.

Dr. Kerr of Winnipeg read a paper on "The Examination of an Abdominal Hydatid Cyst." The patient was an Icelander who came into the Winnipeg Hospital last winter with a large abdominal tumour. From the history, and as the result of exploratory puncture the attending physican, Dr. Whiteford, made the diagnosis of hydatid cyst and handed the case over to Dr. Kerr for operation. The operation was performed in two stages as recommended by Volkman ; a cut was first made down to the growth and six days after it was incised. To open the cyst he had to cut through two inches of the liver ; the cyst was then emptied and washed out with a solution of iodine. The patient did well and went home in two months. He remarked that these were rare cases: up to 1880 only 150 cases had been reported. This was the second case that had been seen in the Winnipeg Hospital. The other patient was operated on but died on the table.

Dr. Eccles of London, Ont., related the history of a case which had been treated a year ago in the London Hospital.

The section then adjourned.

General Meeting—Second Day.—Aug. 19.

The meeting was opened at 10 a.m. Dr. Holmes in the chair.

The following report was presented by the Nominating Committee. To be officers for the ensuing year :

President—Dr. J. E. Graham, Toronto.

General Secretary—Dr. Stewart, Montreal.

Treasurer—Dr. Sheard, Toronto.

Vice-Presidents—Ontario : Dr. Dupuis, Kingston. Quebec : Dr. Russell, Quebec. New Brunswick : Dr. Currie, Fredericton. Nova Scotia : Dr. Wickwire, Halifax. Manitoba : Dr. O'Donnell, Winnipeg.

Local Secretaries — Ontario : Dr. McKeough, Chatham.

Quebec: Dr. Bell, Montreal. New Brunswick: Dr. Lunam, Campbellton. Nova Scotia: Dr. Trueman, Sackville. Manitoba: Dr. Chown, Winnipeg.

Chairman of Local Committee—Dr. Malloch, Hamilton.

Place of Meeting—Hamilton.

Moved by Dr. Sheard, seconded by Dr. Canniff, that the report be adopted and the gentlemen named therein be elected officers of the Association for the ensuing year—*Carried.*

DR. CANNIFF, having been absent, wished, by privilege, to say a few words upon the question introduced yesterday by Dr. Cassidy. If infected persons pass through Quebec in a stage of incubation, from its position the city of Toronto is specially exposed therefrom; and indeed this might easily happen. He thinks the resolution passed yesterday might go further and recommend to the Government the appointment of some medical man whose duty it should be to specially watch and keep track of all persons who have been discharged from an infected vessel in quarantine. This would not involve a very large expenditure and might be the means ot securing the safety of the Upper Province.

DR. FENWICK said that he had recently had a letter from the Minister of Agriculture stating that no further appointment could possibly be made in the city of Montreal; that the Government considered that they had a sufficient establishment at Rimouski, at Grosse Isle, and at Quebec, and had determined against further increasing their staff. Dr. F. himself did not think it necessary.

Moved by Dr. Graham, seconded by Dr. Sheard, that the by-law requiring notice of motion for a change of by-laws be suspended.—*Carried.*

Moved by Dr. Campbell, seconded by Dr. McFarlane, and resolved, that the by-law authorizing the formation of committees whose duty is to make report at the annual meeting on Medicine, Surgery, Midwifery and Therapeutics, having been suspended by an unanimous vote of the Association, the President do name at this meeting the reader of an address upon some special subject in Medicine, Surgery, Midwifery and Therapeutics, and that these gentlemen be at once notified of the fact of their appointment by the Secretary. In the event of the gentlemen named by the President failing to perform the duties assigned to them, the President to have the right to name substitutes.—*Carried.*

Moved by Dr. Playter, seconded by Dr. Clarke, Toronto, that the following be a special committee of this Association to consider the question of a uniform system of vital statistics for the Dominion, and to urge upon the Federal Government the desirability of early action for the establishment of some system for the collection of births, marriages and deaths throughout the Dominion, viz.: Drs. Sullivan, F. W. Campbell, Larocque, J. A. Grant (Ottawa), Canniff, M. J. Ahern, and the mover and seconder.—*Carried.*

Dr. F. W. Campbell said, you cannot get Civil Registration in the Province of Quebec, the registration here is done by the *curés.* They have agreed to give a return to the Government if they are paid for it ; a clause to allow a man not wishing to register with the *curé* to register before a civil officer, was defeated by a large majority. It is useless to expect more in this Province. In a few of the larger cities, statistics are kept and sent in and it seems as if we could not go further than this at present. The subject had been worked at by a committee during the whole of last winter, and this was the conclusion they had arrived at.

The meeting then adjourned to sections.

Medical Section—Aug. 19.

Dr. F. W. Campbell read a paper on "The Treatment of Whooping Cough by Quinine." He spoke of the unsatisfactory character of the treatment usually adopted, and stated that a severe case of the disease in his own family had specially directed his attention to it. He referred to a paper by Dr. Dawson, Professor of Diseases of Children in the University of New York, on the quinine treatment of whooping cough, which appeared in the *Canada Medical Record* for July, 1873, also to one by Prof. Binz, of the University of Bonn, on the same subject, which was published in 1870. The authors of these papers considered pertussis as a neurosis of the pneumogastric nerve, caused by irritating and infectious mucus that accumulates in the pharynx and larynx. In this mucus was found a fungus, on which quinine had a specific action. Quinine also increased the secretion from the buccal and salivary glands, and thus assisted very materially in loosening the tenacious mucus from the pharynx. Dr. Campbell stated that in his hands the quinine treatment had been most successful, and that he now had notes of over one hundred cases of this disease treated in this way, with most satisfactory results. For children of three years and under, he gave it in doses of half a grain every two or three hours, and proportionately in larger doses up to twelve years of age, when two grains might be given.

It should be administered in solution, and *no* sweetening should be added to disguise the taste.

Dr. Sherman of Ogdensburg, N.Y., said he had used quinine in whooping cough with excellent results. He considered it the very best treatment. He had, however, used sweetening to disguise the taste, and judging from results, saw no objection to it.

Dr. Macfarlane (Toronto) said he had seen an article by Dr. Campbell on this subject a few years ago. Since then he had used quinine in pertussis, and had had excellent results.

Dr. Graham of Toronto had employed quinine extensively in pertussis, and could endorse most heartily Dr. Campbell's good opinion of it. Sometimes he had combined it with tannin. So far as his experience went, he saw no objection to the sweetening of the quinine mixture.

Dr. Campbell, in reply, stated that Dr. Dawson very strongly objected to any disguising of the bitter taste of the quinine. He had followed the directions in this respect, and was satisfied that they were correct. In fact, he was strongly of the opinion that even the appetizing effect of quinine was much interfered with by the addition of any syrup.

Dr. Reeve of Toronto then read a paper upon " Glaucoma."

Surgical Section—Aug. 19.

Dr. Kerr reported " Two cases of Gunshot Wound of Hip-joint." Both were caused by the accidental discharge of small shot. The soft parts were much torn and the trochanter in both cases was split and the joint laid freely open. In first case patient was not seen till three weeks after accident during which time had no treatment. His condition was deplorable, the whole wound was in a sloughy condition and horribly fetid, patient was in a septic condition. The wound was thoroughly cleansed and the sphacelated portions freely excised, and wound irrigated and packed with iodoform gauze, and an anterior wire splint applied. The improvement at first was marked but the patient died of septicæmia and exhaustion in a short time. The second case was seen immediately after the accident, the wound was treated in the same way and the limb fixed in an anterior Smith's splint and a posterior splint also employed so that immobility was secured and recovery with a useful limb resulted. Dr. Kerr referred to other methods of treatment, viz., excision and amputation. In these cases the mortality was high. He brought these cases before the section in order to show what could be done by conservative methods in such cases.

DR. CLARKE of Toronto said that a number of gunshot injuries of the hip were reported in the surgical history of the American Rebellion. He had seen several cases treated when with the Federal Army in Virginia. They were treated under canvas and did well.

DRS. RUSSELL, FENWICK and SHEPHERD also joined in the discussion.

DR. BULLER of Montreal read a paper on "The Treatment of Acute Purulent Ophthalmia." He remarked that eyes were now seldom lost in these cases. Some used hot applications, others cold; some used astringents, others did not; some used antiseptics, others relied on frequent and thorough washings. All were agreed on the necessity of frequently cleansing the diseased eyes. Many remedies were used, as quinine, tannic acid and corrosive sublimate; but the antiseptic treatment was still on its trial. Solutions used as germicides must be strong; weak solutions were of little value as antiseptics. He had lately treated three cases of gonorrhœal ophthalmia. He first used boracic acid and afterwards a solution of corrosive sublimate. The latter in the strength of 1–2000, without improvement, but the application of a solution of 1–1000 was followed by immediate and marked improvement· The patient was discharged cured in twenty-four days. In the second case, the patient was a child aged three years with acute vaginitis. Under similar treatment she rapidly recovered. In the third case, also one of gonorrhœal ophthalmia, there was sloughing of the cornea. He treated by hot fomentations and washes of boracic acid used warm; improvement immediately followed, the slough separated and a clean ulcer was left which soon healed. Dr. Buller thinks in general practice rigid cleanliness is not sufficiently carried out. With regard to cold applications he thought they were the best, but whilst applying them the cornea should be closely watched; if any cloudiness, hot applications should immediately replace the cold and the cornea will be saved.

DRS. SMITH, RUSSELL AND FENWICK took part in the discussion which followed.

DR. SHEPHERD then read the notes of a case of "Ainhum" which he treated in the Montreal General Hospital. The disease affected the little toe of a negro aged 47, born in North Carolina. The little toe became affected some six years before. First noticed a small ulcer on the digito-plantar fold, then a constriction formed at this point, which gradually deepened;

the toe soon become much larger than normal, and very moveable, causing much trouble in walking. The toe was amputated; on dissection, appeared to consist of much thickened skin and fibrous tissue. The bones of the toe were much atrophied and the joint had disappeared; the proximal phalanx looked something like a claw. The reader of the paper then gave a short sketch of the history of the disease, saying it was first accurately described by Dr. Silva Lima of Brazil, that it was a disease confined to the dark races, and was more common in some families and more in men than women. It sometimes affects the fingers and even the limbs. The disease, if left to itself, lasts about ten years and ends by amputating the affected member. The word "Ainhum" is a negro word and means "to saw."

Dr. Fenwick reported a case of "Amputation at the Shoulder Joint for Myelo-Sarcoma. Patient, a woman aged forty-seven, seven months pregnant, came to the Montreal General Hospital in the spring of the present year with a large ulcerated tumor a little below the shoulder of the right arm, and a smaller tumor near the biceps. Two years ago received a blow and within three weeks perceived a small lump at site of injury. It rapidly grew and was removed. She was told it was a fatty tumor. It again returned and this time plasters were applied by a cancer doctor which burnt the tumor and caused the ulcerated appearance which was seen when patient was admitted to hospital. Dr. Fenwick amputated the arm at the shoulder joint and patient did remarkably well, never having a temperature higher than 99°F. On examination, the tumor proved to be a myeloid sarcoma. This was the first case Dr. Fenwick had seen where the myeloid tumor first affected the tissues external to the bone and periosteum.

Dr. A. Lapthorn Smith read a paper on "Alexander's Operation and the Treatment of Displacements of the Uterus." After describing the operation minutely, and also giving a discourse on the anatomy of the parts, Dr. Smith went on to say that the round ligaments were really muscles, and were not in a state of tension except during coition. They are the homologues of the cremaster muscle in the male. He considered that the risks of the operation were great. It was not a justifiable operation except in extreme cases, and when performed, did not permanently cure displacement of the uterus. The author said that displacements of the womb could be corrected by lessening congestion and by keeping the liver clear and the lower bowel empty. The paper was illustrated by diagrams and tables.

In the discussion that followed, DR. TRENHOLME agreed with Dr. Smith that the operation was one that would soon be known only in history. He had operated once, but had failed to find the ligament. He himself had, many years ago, suggested a similar operation.

DR. SHEPHERD had frequently dissected the round ligaments, and had performed operations on the dead subject. The uterus could be easily elevated by pulling out the ligaments. He did not think the fact that a few muscular fibres had been found in the ligament proved that it was now in active use as a muscle, it was more a fœtal remnant of the ligament of the Wolffian body, and was the homologue of the gubernaculum testis of the male.

DR. AHERN of Quebec said that the round ligament was frequently abnormal, and that at its insertion it was often much atrophied. In cases where the uterus was fixed, tightening it would not correct displacements.

The section then adjourned.

AFTERNOON GENERAL MEETING—AUG. 19.

Meeting opened at 2.20 P.M. Dr. Canniff, in the chair.

Minutes read and approved.

DR. MCEACHERN of Montreal was introduced and gave a very interesting account of pleuro-pneumonia in cattle, a disease which has recently invaded the cattle quarantine in Quebec.

Moved by Dr. Graham, seconded by Dr. Reeve, that a vote of thanks be tendered to Dr. McEachern.—*Carried.*

Moved by Dr. Dupuis, seconded by Dr. Graham, that the reports of the sections be accepted as read and adopted.—*Carried.*

Moved by Dr. R. A. Reeve, seconded by Dr. Dupuis, that the President and Secretary be authorized to give credentials as delegates to the International Association to meet in Washington next year.—*Carried.*

Moved by Dr. Reeve, seconded by Dr. Sheard, that a vote of thanks be tendered to the authorities of Laval University for their kindness in placing rooms in the University building at the disposal of the Association.—*Carried.*

The Association then adjourned.

CANADA

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THE CANADIAN MEDICAL ASSOCIATION.

We devote this month a large proportion of our space to a full report of the proceedings at the annual meeting of the Canadian Medical Association at Quebec. The meeting was a smaller one than usual but yet representatives from all sections of the Dominion were present, including gentlemen from such distant parts as New Brunswick and Manitoba. The Province of Ontario was largely represented in numbers and distinguished by the active part taken by these members in the scientific work of the Association. It is not to the credit of the Ancient Capital that, although it was known for a whole year that we should meet in that city, and although a Vice-President was specially elected from amongst the resident profession, yet no Committee of Arrangements was ever formed, no accommodation was secured in advance, and no attempt whatever was made on the part of the local members to advance the interests of the Association or the success of the meeting. It is not to their credit that the attendance of local members at the sessions was *nil*, with two or three notable exceptions. It is not to the credit of the medical men of this Province, generally, exclusive of the City of Montreal, that at an important meeting of the Dominion Association held almost at their doors, they were conspicuous by their absence. It was a matter of very general remark amongst the numerous American visitors who happened to be present. At the early meetings of this Association, the attendance, altogether, was much larger, and both in Montreal and in Quebec our French-Canadian *confrères* attended numerously and took an active interest in all the proceedings. We do not know the reason for the change, but certain it is that of late years, one or two only are to be found at these annual meetings. It is not to the credit of the large body of French Canadian practitioners of the Province of Quebec that neither do they maintain a Provincial Medical Society not will they attend the Dominion Convention when it is brought into their very midst.

In the absence of any arrangements, the annual dinner was not held. We hope this pleasant social part of the meeting will not be omitted next year, but at the same time trust that the Society will insist upon making it a subscription dinner, thus removing any pecuniary burden from the shoulders of the members resident in the locality where we meet.

DR. FRANK H. HAMILTON, the well-known surgeon of New York, is dead. We refer to our correspondence from New York for some interesting facts in the life of this prominent and much-respected man.

Medical Items.

THE THERAPEUTIC USES OF CUS.—In looking over the files of our esteemed contemporary, the *Dublin Journal of Medical Science*, for another purpose, we have recently noticed an article on "Cus," commending it as a reliable tænicide, with remarks as to the method of preparation that yields the most forcible product. We have no doubt it has been used in this country by patients affected by parasites—in fact, its association with helminthiasis is, to the minds of many, quite natural—but its employment certainly has not been restricted to that or any other special field. The native product, *C. Americana*, is said to embrace a large number of varieties and to attain a greater exuberance of development than its congeners of any other clime. In the mining regions of the Rocky Mountains and the Pacific coast, we find the *C. occidentalis*, a variegated and particularly florid specimen. It is used in large quantities and seems to be applicable to all conditions, much like quinine in the South or whiskey in New York. It is not, however, incompatible with the latter drug. The dose varies greatly. It is usually repeated p.r.n., although we are bound to say that its effect is entirely incommensurate with the popularity of the agent.—*Boston Med. and Surg. Journal.*

CANADA

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Original Communications.

CRIME AND RESPONSIBILITY.

By Daniel Clark, M.D.,
Medical Superintendent of the Asylum for the Insane, Toronto.

(*Read before the Canadian Medical Association, at Quebec, August*, 1886.)

Crime has been defined to be a violation of human law or the law of the state; sin, a violation of the Divine law or the precepts of religion: vice is opposite to virtue, and is an offence against morality, or a violation of the moral law. Crime is especially the object of jurisprudence; vice, of ethics; and sin, of theology.

Responsibility is the capacity of discharging an obligation, or ability to be accountable for actions.

We must bear these definitions in mind in discussing the relation of crime to responsibility. Some classes of humanity must be held to be exempt from responsibility. 1st, The child of immature age. 2nd, The idiot with arrested brain-growth and dwarfed mental development. 3rd, The imbecile in whom the mental powers exist, but in a feeble and circumscribed condition. 4th, Various classes of the insane. 5th, The epileptic (not insane), when fits are coming on or leaving. 6th, The dipsomaniacal in the frenzy of drunkenness.

The two last classes are held in law to be responsible, whether conscious of their acts and the quality of them or not. Law says it cannot distinguish between the knowing act of an epileptic and that done unconsciously. It also says the drinking maniac is in that condition because of his voluntary act of drinking; hence his accountability. The law holds that all insane are irresponsible, but bases its definition of insanity on the capacity of a person to know the distinction between right and wrong in the abstract. This fulcrum mind-test was laid down by the English judges in the McNaughton case (1843). In carrying out the law, judges never give a personal opinion. To them the accepted *lex scripta* is gospel truth, as far as the verdict and execution of law are concerned. They do not question the received decisions, authorities and precedents of their legal ancestry. To them, it is what the law commands, which is supposed to be founded on justice in its fundamental principles. Were a judge to act on experience and thereby be able to alter at will his instructions to the jury against what had been decided by courts no more competent than himself, he would fear for the stability of the judiciary. We need no other example in this particular than that already mentioned. To make a knowledge of right and wrong the crucial test of sanity has wrought untold mischief in the administration of law. In fact, it is now acknowledged by eminent jurists, such as Sir James Fitzjames Stephens, in his works on "Criminal Law," and by Lord Chief-Justice Cockburn, in his opinions given before a parliamentary committee, that such a rule of law is misleading and faulty. The consequence has been that in recent works on medical jurisprudence a new element has been introduced into the legal definition. The ethical test is not given up, but there is added such a clause as, "the law allows that a man who, by reason of mental disease, is prevented from controlling his own conduct, is not responsible for what he does." (*Stephens' Relation of Madness Crime.*) It is added, "No doubt there are cases in which madness interferes with the power of self-control, and so leaves the sufferer at the mercy of any temptation to which he may be exposed; and if this can be shown to be the case, I think the sufferer ought to be excused." (*Stephens.*)

In 1874, when Russell Gurney's Bill was before the English Parliament, a clause embodying the recognized fact that the moral test was very fallacious, and that a statement should be introduced accepting as proof of unsoundness of mind or lack of responsibility such brain disease as destroyed self-control. As might have been expected, the law officers of the Crown recommended its rejection, and it was shelved accordingly. When this proposed amendment was before the committee of the House, Lord Chief-Justice Cockburn cordially accepted this amendment and significantly said: "The pathology of disease abundantly establishes there are forms of mental disease in which, though the patient is quite aware he is about to do wrong, the will becomes overpowered by the force of irresistible impulse. So the power of self-control, when destroyed or suspended by mental disease, becomes, I think, an essential element in irresponsibility." At the same time, Sir James Stephens suggested that in such cases a jury should be allowed to bring in one of three verdicts, viz.: 1st, Guilty. 2nd, Guilty, but the power of self-control was diminished by insanity. 3rd, Not guilty on the ground of insanity.

These were only the opinions of distinguished men, and not being statutory, the old law is not changed. The judicial instructions to juries in rendering verdicts remain as before, and even Chief-Justice Cockburn was obliged to charge juries according to the written law, although he knew how inconsistent with physical fact the law is. He was obliged to abide by the traditions of the legal fathers. Hanging, under the old definition, is still going on, in spite of the flood of knowledge which has been poured upon the subject by psychologists during the last forty years, since the moral test formula became law. The more enlightened opinions of eminent jurists must ultimately have weight in the British Empire and in the United States, and will tend to affect legislation in the right direction. This is notably the case in the neighboring Republic. Newly enacted penal codes in some of the States have, in addition to the moral definition of 1843, some form of recognition of loss of self-control by virtue of disease.

From these general statements it will be seen how widely law and medicine differ on this radical and all-important matter. The medical test for insanity is based on the presence of physical disease and its abnormal results on conduct: the legal test is metaphysical and theoretical. The medical diagnosis is based on pathology and experience: the legal ignores any physical condition which does not affect the moral attributes. The legal cares nothing for impulse, loss of will power, or sudden change of character and conduct without motive or from childish incentives: medicine takes in the whole man in all his multifarious interests. The former tests by the ambiguous notion of *right* and *wrong*, but the latter by the *will not* or *can not* of each individual. The one deals with an abstract idea: the other in what is found every day in the wards of any lunatic asylum. Law adheres to tradition and the fiat of statutes: medicine points to the facts of clinical experience and practical knowledge. Legal *dicta* permit a counsel and judge to instruct a jury both as to law and facts, both as to responsibility and insanity; but a medical witness—whatever his experience and skill may be—is not allowed to relate them to the jury, although they may be of intrinsic value in teaching and enlightening those in whose verdict lies the destiny of a prisoner. The man, of all others, who should know whereof he asserts, must be "a dumb dog," while the man whose experience may be of the most crude kind is legally allowed to appeal, to instruct and direct a jury in the most abstruse of all medico-legal subjects. The writer, not long since, heard at a state trial a well-known Canadian barrister and Queen's counsel instruct a jury that any ordinary man was as able to detect any form of insanity as could an expert. The absurdity of such a statement might be seen any day by turning loose into the wards of a strange asylum this counsel, a jury, and asylum medical officers, to select the sane from the insane as they were presented. A short experience in this discriminating work might not convince, but it would certainly give ground for legal reflection and possibly prevent a repetition of such a silly statement, unless "our learned friend" had passed the age of conversion. Perhaps he should not be blamed too much, as his text-books make the same assertion. It would be rank heresy for him to fly in the face of accepted authority, even were he convinced of its absurdity.

In reading the history of jurisprudence, it is satisfactory to observe that the broad minds of the great jurists and legislators are groping towards the light. Let us take the question under discussion, for example.

During last century, the definition laid down by Lord Coke was accepted as law. In this it was held that to be insane meant to be totally devoid of memory and understanding when an insane act was committed. If this negative condition did not exist, such were responsible. It need scarcely be said to-day that no insanity ever existed to which this definition would apply.

In the beginning of this century it was held that insanity should be tested on the basis of the possession of delusions. Of course the absence of them would imply sanity, yet we know many insane have no delusions. This phase of legal thought was followed by the crucial test that any person who has the capacity "to know the *nature* and *quality* of the act he was doing" must be sane, and responsible. Many insane are quite capable of knowing as described This moral test is absurd in itself. What right and wrong are in the abstract have not been determined. Law is one thing and ethics may be quite another. As one item of the curiosity of law penalty it may be noticed that at the beginning of this century more than 200 offences, from robbing hen-roosts to treason and murder, were punishable by death in the British Isles. In 1816, no less than 58 persons were under sentence of death for such offences, and one was a child under ten years of age, who could neither read nor write. As the years rolled by, it became evident that punishment and crime were unequally associated, and law began to adopt a sliding scale in the administration of justice more in keeping with the quality of the crime. Any one who will take the trouble to wade through the evidence on which the verdicts of those days were based, will see it fared badly with the poor lunatics. The court suspended the insane, in many instances, instead of the judgment. The putting the life of the assumed insane in one scale and then placing these ever-changing conditions of law in the other, have been, is now, and apparently will be the means of putting many innocents to death. Definitions are mischievous when they bind down judges, juries, and legal evidence to certain lines of opinion, from which there is no deviation permitted. The result, so far, has been that the pathway of legal record in the past is full of the victims of crude definitions and metaphysical subtleties.

The word *insanity* is a relative term, and means a disease. It is always a brain disease, with gradations of severity. As we cannot tell where the colors of the rainbow blend, nor can we point out where the steel grey of the dawn commenced, nor where the last glow departs of the closing day, neither can we define when sanity ceases and insanity begins. There is a border-land which lies in the shadows, and no one can penetrate it with a pencil of light. Reason passes into it, possibly unconsciously, or, it may be, with dread forebodings, and emerges from the ominous cloud into the positive region of mental alienation. The foe comes stealthily, but surely, and ties the captive to his chariot-wheel. There is at this stage no mistake as to the mind trouble. It has assumed a definite form in its prominent features, which are modified by the personal characteristics of each individual: hence no general definition of insanity can ever be given. No two people are alike in any one particular, so mental manifestations differ. In judging the insane, the temperament, peculiarities, education, habits, surroundings and apparent motives must always be taken into account. Does the man act naturally? Is he himself? Is his unusual conduct brought about by anything but brain disease? We must measure all men by their own half-bushels, and not by an arbitrary standard of capacity. The ascending series of intelligence seen in the normal creation have a counterpart in insanity. If we take an intellectual general test and apply it to each class of the insane, we will find at the lowest point the harmless dement in whom is little mental capacity beyond that found in the helpless child. Such have little vitality beyond organic life. At the other end of the series are the 'cute, clever, intelligent insane, who puzzle even experts in their most searching examinations. Among this higher class are found the insane over whom courts sit in judgment, and concerning whom juries give strange verdicts. The stupid, the boisterous maniac, and the suicidal and religious melancholics, are easily known; but the clever possessor of delusions which he carefully hides, and which may be the mainspring of his general conduct, needs to be carefully examined, watched and studied before the most experienced can pronounce definite judgment and determine responsibility. These delusions may be of a harmless kind, and control or may not impel overt acts, or they may be mainsprings to urge to insane manifestations. Of course, we all have delusions of some kind, but the judgments of the sane give them proper value. The insane accept them as facts, not fancies. There is a large class of individuals between the feeble-minded and the normal section of the community, and *animalism* is the predominating feature of such beings. The intellect is developed to such a degree that they may be tolerable citizens as far as intelligence is concerned. They are, however, low in the scale, and are known to be such by even ordinary observers. The cunning, selfish instincts and impulses found in animals are strongly dominant in them. They set lightly on law or any of its restrictions so long as they can avoid detection. With such, it is not a question of morals, but of punishment. The sense of right and wrong is feebly developed, and the moral judgments are seldom exercised. Conscience is either not present, or, at best, weak and functionless, and gives little trouble. It is not an ethical nature blunted by repetitions of evil, but a faculty never brought to maturity. Such have been called "moral idiots." No crime, however dark and horrible, will cause them to lose a meal or a night's rest. Like brutes they live, and like brutes they die. If they have not much mental activity, they may be harmless in a community from sheer *inertia*, and are never heard of but as *ne'er-do-weels;* but if the brutal instincts goad on the intelligence, we have developed a low class of criminals for whom there is little hope. They crop up as the chronic vagrant, tramp, petty thief, burglar, or, in short, the inveterably depraved all-around character. The whole being is saturated with laziness and cupidity, through which a living can be procured at the expense of the honest workers of society.

The fact is, all intelligent creation is like a pyramid. The first section from the base represents the animal instincts of man and beast. The next section may represent the higher intelligence, not instinctive ; it is much narrower in its scope. The section including the apex might typify the moral nature, and represents a much narrower and higher class of beings. In humanity, the building up of our nature is in the following order from birth : 1st, Animal instincts. 2nd, Intellectual powers. 3rd. Moral conceptions. In any or all of these we may have arrested development. When all are possessed in a normal degree, the loss of each section of the prism is in the inverse order of building up. This is notably seen in the acquisition of depraved habits and in insanity.

Now, in the building up of this sympathetic whole from childhood to adult life, we may find the growth arrested at any of the stages. If development should be checked in any stage of youth, only the animal exists : hence the idiot and imbecile. If arrested in the progress of intellectual growth, we have feeble-mindedness and dwarfed knowledge. If atrophy takes place in the last section of building a full manhood, then have we intelligence, but no moral nature, or, at best, only the rudiments of one.

No amount of metaphysical subtlety can reason away the physical fact that our whole entity of body, intellect, will, affections, emotions and morals, are only manifestations of one organic whole, and are interdependent upon one another in many relations of this unity. The genesis of our conduct is largely dominated over and affected by their development, their relative power, and their controlling activity. The elements of our existence have in them the potentialities of the coming man. Habit, education, and favorable surroundings do direct these primary forces for good or evil, but they never can obliterate the characteristic features which make us distinct from one another. Our individuality is born with us, and goes with us to our graves. A very little change in the relation of our constituent elements of character and of primal nature does alter very much individual peculiarities, just as a very little change in chemical elements brings about radical differences in material substances. The old landmarks, however, remain unchanged, and must, in the nature of things, so continue. No two physical forms or faces of humanity are akin ; no two brains are alike ; and no two minds are counterparts of one another, except in a generic sense. The primal elements are varied, and the growth of brain and mind are different in each person. The immature brain of a child may be fully developed into the mature and complex brain of manhood, but the attempt to improve a partially grown brain, such as is seen in the feeble-minded, is well-nigh hopeless. The juvenile brain grows, and mentality with it, in a corresponding ratio, so that an equation might be made between the two. A dwarfed brain has only a mental scope equal to the brain.

The child is judged according to its mental capacity, so ought the savage and the feeble-minded to be. It is not by years we should measure mind-power, but by the standard of the ordinary intelligence of the ordinary man. There are children wise beyond their years, and there are men with childish minds.

The brains of the lower forms of humanity and of the higher beasts come close together in structure and shape. The natures of both such men and beasts have much in common. Both have intelligence and reasoning power, but there is no evidence that they have a moral sense, or if so, it must be in a rudimentary degree. They have no contrition for acts. Punishment, not compunction, restrains them. The idiot has not even the animal intelligence. The imbecile is a step higher in the plane of instinct and knowing, but is little, if any, higher in these than a dog, elephant, or chimpanzee, and is held not to be accountable because of mental deprivations. The feeble-minded approach more nearly to the normal man, but are lacking in keenness of judgment, the conceptive faculty, and mental concentration. Such are either very childish and harmless, or show viciousness or many forms of depraved propensity. The criminal and accountable, in the next stage, manifest themselves in the nature, but at the zero of the scale. They have no keen appreciation of the rights of others. Many of them are children with grown bodies, just as we find in the habits, tastes and mental scope of the untutored savage. The immature brains of a child, a barbarian, and the weak-minded produce analogous mental phenomena. It is to be remembered that there can be no responsibility where there is no moral nature, and there can be no moral nature where there is little or no intellect. The necessity of a knowledge and appreciation of our relation to law and of the consequences flowing from its infraction may exist without responsibility. To simply know is one thing, but to be able to determine and set in action reasonable volitions is quite another.

These statements are made to help to an appreciation of another class, which can be placed between the feeble-minded and a full-developed man. We find a large class of the community who have, in a low degree, judgment, discretion, common and moral sense. From this class comes the vicious and low criminal. Reference is not here made to those who become so by association, example, and habit, but to those who are congenitally weak in all the necessary attributes of a well-ordered humanity. They start life handicapped with low cunning, inordinate acquisitiveness, selfishness, cruelty, low mental powers, and lack of a moral sense. All of these deterrents are seen in a lower plane in the brute creation. To prey on the public, to do no work for a livelihood, to indulge in petty larceny, to revel in the mere performance of wickedness for the love of it, whether sensualistic or destructive—in short, to indulge in all depraved tastes and vices : never to know practically what is meant by the stings of conscience. A love of wrong-doing is an inborn and inbred condition in which they take delight. As a mattter of fact, the responsibility of such is small, measured by any rule of ethics, and it is a serious matter to consider if such criminals should be incarcerated for life when they become chronics. They should be made to earn an honest living, not merely as a penalty for crime, but as a charity towards the vicious, and as a protection to society against their ravages. Such ordinarily spend most of their time in prison because of repeated offences, and are let out of durance intermittently, only to prey on society, to educate others to follow their example, and to leave behind them a criminal progeny. The low criminal, by oft convictions and repeated imprisonments, becomes an incurable law-breaker, and should be treated as incorrigible. Experience shows they are such, and being so, have forfeited all right to liberty and personal consideration beyond kind treatment and forbearance, based on industrious habits and good conduct.

It is easily to be understood, then, that in this next upwards stratum is found the larger number of our ignorant, depraved, lazy, bestial criminals and insane. Their cunning will make them sham religion when it suits their purpose, their instability makes them yield readily to temptation, their *animalism* makes them the sport of their passions, their love of ease makes them indulge in the luxury of vagrancy or petty larceny, their low tastes make them victims of strong drink and the seekers of like associations, and their gregarious instincts cause them to form combinations which threaten to disturb the foundations of society.

In view of these facts, it is one of the great social problems of to-day to determine, in equity, how much conduct is influenced by natural and irresistible qualities, and how much is modified by immediate and proximate external causes and circumstances, or wherein our actions and modes of thought are influenced and directed by our natural aptitudes and propensities. As far as we can know these factors, they should be taken into account in estimating the culpability of guilt. Law is based on abstractions, and punishes absolutely according to act and not according to turpitude. The man who commits a homicide in the frenzy of drunkenness has no consideration shown to him in his sentence, yet culpability may depend largely on circumstances. In one case, the passion for drink may have come on from a vicious and acquired habit, therefore it is blameable ; in another, it may be a dipsomania by reason of hereditary transmission, from which there may be no manumission. It is a heritage of uncontrollable impulse, which is intermittent in its invasion and departure. In both classes the penalty is identical.

A forgery is committed by a man whose whole life record has been that of honesty and truthfulness, but who, by stress of financial pressure, has suddenly fallen from his high estate.

The trend of his whole career has been in the direction of virtue and honest living, but with commercial disaster staring him in the face, he commits a felony, which he hopes to rectify before discovery. His whole moral nature revolts against the act, but his sensitive fear of men and of its effects on his family and himself is a motive too strong to resist.

Another man has a mean, grasping, selfish nature. He has been naturally so from childhood. He has cultivated all evil influences, and has sought environments calculated to encourage their growth and deepen their intensity. Because of these tendencies, natural and acquired, he forges and cheats simply to possess and increase his gains, based on the pure love of greed.

The act in both examples is the same, but in their comparative guilt they are far asunder. In the one, it is a sudden impulse to deviate from the well-beaten track of a life-long rectitude; in the other, it is the natural outcome of an ingrain vicious nature. The responsibility in both cases is scarcely to be compared, but the penalty is equal. The motives are not taken into account. In fact, the man of heretofore good reputation is held to be the greatest culprit, although it was only an incident in his life, and in the other the outcome of a bad record.

SUMMARY.

1st, The natural history of crime shows that brains of chronic criminals deviate from the normal type and approach those of the lower creation.

2nd, That many such are as impotent to restrain themselves from crime as the insane.

3rd, That immoral sense may be hidden from expediency by the cunning seen even in the brutes, until evoked by circumstances.

4th, No man can shake himself free from the physical surroundings in which he is encased.

5th, Crime is an ethical subject of study outside of its penal relations.

6th, Insanity and responsibility may coexist.

7th, Some insane can make competent wills, because rational.

8th, The monomaniac may be responsible should he do acts not in the line of his delusion, and which are not influenced thereby.

9th, Many insane are influenced in their conduct by hopes of reward or fear of punishment in the same way as the sane ; the rudiments of free-will remain.

10th, Many insane have correct ideas in respect to right and wrong both in the abstract and concrete.

11th, Many insane have power to withstand being influenced even by their delusions.

INHIBITION OF THE HEART IN DIPHTHERIA.

By J. H. Gardiner, M.D., London, Ont.

(Read before the Canadian Medical Association, at Quebec, August, 1886.)

The tonsils, pharynx, œsophagus, stomach, part of the intestines, larynx, trachea, lungs and heart derive their chief nervous supply from the pneumogastric. It is true, however, that this is scarcely a simple nerve, seeing that it receives such large accessions from the sympathetic and spinal accessory. Besides a full anastomosis with many of the special facial nerves, as well as with the general spinal nervous system, in that so many important vital parts are supplied from the same source, one need not be surprised that a very slight irritation to any one will give rise to symptoms far graver than what the apparent cause would lead us to expect. Tickling the throat with a feather, or bringing any nauseous substance into the mouth, induces vomiting. A slight sore throat causes headache, earache, backache, sickness at the stomach, and a horrible feeling of malaise. And any one who has suffered from quinsy or diphtheria will testify to the deathly feeling of sickness and exhaustion which these troubles give rise to. And most medical men of experience in the treatment of diphtheria will have met with cases similar to the following, or with cases where death supervened even more suddenly in persons where the disease appeared conquered and convalescence was apparently fast progressing :

Case I.—Miss A., aged 14, a beautiful girl, with a first-class family and personal history, was, on the 4th day of Feb., 1884, attacked with diphtheria. The case was a severe one, and vomiting, with a partial loss of voice, marked it from the commencement. There was also a good deal of sloughing of the throat, and the urine was loaded with albumen. The symptoms continued violent for the first four days, and then the case began to do well. Pulse ranged from 70 to 80. Temperature normal. Vomiting slight. Slough came away and membrane disappeared, as also did the albumen in the urine. The appetite improved, and everything pointed to a speedy recovery. On the morning of the 12th—*i.e.*, on the eighth day of the disease—I was struck with the dusky appearance of the skin. The temperature was 97½°, and the pulse 55. In the evening the temperature remained the same; pulse 48, but impulse strong. During the day, patient vomited once. Was quite cheerful, however; said she felt better, and wanted to get out to the dining-room. On the morning of the 13th, patient says she is better. Vomited once through the night. A small herpetic rash on upper lip, at left angle. Skin dusky. Pulse 40, very feeble. Heart-beat regular and well-marked. At 2 p.m., pulse 38; countenance anxious; patient cheerful as to recovery; said she felt quite well, but weak. In the evening, pulse very feeble, and only 32. Patient vomited a good deal during the day. Thirsty. Site of slough on throat looks grey. No membrane. Temperature 97°.

Feb. 14*th.*—Had a restless night, but friends thought her better. Cheerful, but very weak. Could not make out the pulse at the wrist. Heart beats 38. Vomits nearly everything but little pieces of ice. Died from syncope at 2 p.m.

CASE II.—Miss H., aged 5 years; previous health good; family history good. Attacked with diphtheria on the 20th of June, 1886. Case mild during first week, and membrane had almost disappeared.

June 27*th.*—Pulse 60; temperature normal; vomited once or twice. 28*th*—Pulse 50 in the morning and 45 at night; vomiting. 29*th*—Pulse 40, fairly strong; thirsty, and vomits now and then; herpetic eruption on face; in the evening, pulse 36; temperature 97½°. 30*th*—Pulse 32, soft and compressible, and father says that he counted pulse at 5 a.m. and found it only 28 ; temperature 97° ; patient restless, but intellect clear. Vomiting.

July 1st.—Pulse very feeble, 40 in morning and 45 evening. *2nd*—Patient died in fainting fit at 4 a.m.

I cannot say what an autopsy would reveal in cases like these. I would suppose that there would be heart-clot, but this would not explain all the symptoms, or the same slow pulse would be observed in other cases of death from this cause. I have not noted such in cases where a post-mortem proved such formation. One of these two cases it must be : 1st, Paralysis of the sympathetic ; 2nd, Nervous influence on the heart through the pneumogastric, either direct or reflex. That the local paresis following some cases of diphtheria is due to a disturbance of the nutrition of the nerves through the sympathetic, one would infer on account of the insidious manner of its advent, the extent to which it spreads, and the slowness of recovery. But this, although it would explain the vomiting and prostration, will not explain the retardation of the heart. The experiments of Weber, Bernard and other physiologists show how the heart's action may be retarded by galvanization of the pneumogastric. They also demonstrate that it is in branches derived from the spinal accessory that this power chiefly lies. Now the pharyngeal, recurrent laryngeal and cardiac branches of the pneumogastric receive large accessions from the spinal accessory, and the tonsils, pharynx and upper part of the œsophagus are supplied from the pharyngeal nerve. Hence the peripheral ends of this nerve are subject to the direct local irritation of the disease. And from this a reflex action may be transmitted to the brain, or a peculiar irritation may be transmitted directly to the heart on account of the close relations existing between the heart and the affected parts. But if it is true that this irritation of the nerves is the cause of the inhibition, why do all cases of diphtheria or throat affections not present like symptoms ? This I will answer by asking another question : Why are all wounds not followed by tetanus ? You will answer that it is only when the nerves are affected in a certain manner, and the system is in a proper condition for the spread of the disorder from the periphery to the centre, that this dreaded disease supervenes. So a peculiar condition of the organization is necessary for a diphtheritic irritation of the pharyngeal nerves to cause inhibition of the heart.

Correspondence.

VIENNA, Sept. 6th, 1886.

To the Editor of the CANADA MEDICAL & SURGICAL JOURNAL.

DEAR SIR,—In these days of widely extended literary research and keen observation, it is exceedingly difficult to supply anything to the reading medical public that is not, in one sense or another, old; at the risk, however, of repeating to many what they through journals already know, I propose, in this letter, briefly to describe a few of the newer operations performed here.

The first I would mention is the partial amputation of the foot, after Mikulicz of Krakau, in which the heel is removed and the remaining part of the foot is, as it were, grafted on the leg in the straight position, tenotomy being performed on the flexor tendons of the toes, so permitting them to turn forward, forming a short foot, while the body of the foot makes up the deficiency in the length of the amputated limb. This operation is obviously suited only to a particular class of cases—namely, those in which disease is confined to the os calcis, astragalus, and, perhaps, a small part of tibia or fibula. In Germany and Austria this operation has been on its trial for some four or five years, but from its limited applicability, the number of cases operated upon must be comparatively small. The statistics, I believe, have not yet been gathered. Although Mikulicz himself has performed it frequently with great success, till statistics have been fully investigated it is not fair to attempt an estimate of the value to be attached to the operation.

From the nature of the cases to which it may be applied, it is evident that frequent deviations from a typical operation will be necessary. Such, however, may be performed in the following way: The limb being raised to a convenient height, and held firmly by an assistant, the point of the knife is entered, supposing the right foot to be operated upon, immediately behind the scaphoid tubercle, as in Chopart's operation ; the incision, however, instead of being carried over the dorsum, is firmly carried directly across the sole of the foot to the opposite limit of Chopart's dorsal incision—namely, a thumb's-breadth behind the base of the fifth metatarsal bone. This incision strikes directly on the articulation between the os calcis and astragalus behind, and the scaphoid and cuboid in front ; the joint is now opened by severing the ligaments on the sole and sides. The second or upper incision is carried firmly from the middle of one malleolus directly across the back of the ankle to a corresponding point on the opposite side. The upper and lower incisions are now united on each side by a straight lateral cut down to the bones. The ankle joint is disarticulated from behind, and now the free astragalus and os calcis are carefully removed from the soft parts in front ; this is the only part of the operation where a serious mistake may be made. The anterior tibial artery being now the sole dependence of the foot for blood supply, a wound of that vessel, through rough or careless surgery, would ruin the operation. The articular surface of the tibia, with the malleoli, as also the corresponding cartilaginous surfaces of the scaphoid and cuboid having been removed by the saw, the two bony surfaces are brought together, care being taken that the foot be in the proper line ; the scaphoid is pegged, nailed or wired to the tibia, drainage tubes inserted, the wound sewed up and antiseptically dressed, a starch, stiff muslin or plaster bandage is applied outside to give support.

This operation was very successfully performed here a few weeks ago by Dr. I. Salzer, assistant to Professor Billroth. In this case, the lower three inches of the fibula, with the associated soft parts, being diseased (tuberculosis), had to be removed ; a sole flap was ingeniously retained on the foot to fill up the defect. The greatest difficulty in the operation in this case was the very free bleeding from this sole flap ; in an ordinary case this, of course, would not occur, and it was, at least in this, far from satisfactory. It showed the very free supply of blood afforded to the foot by the anterior tibial artery. Tenotomy, for the freeing of the toes, may be performed at the time of the operation, or a few weeks later, before the patient is able to get about on the new foot. The fact that this operation results in an inelegant bulging of the anterior soft parts at the point of union cannot be said to be a real objection to the procedure, which, theoretically at least, seems to be a valuable addition to conservative surgery.

Surgical works are rich in methods of reaching, for the purpose of ligation, most of the arteries of the human body. One vessel, however, seems to have been much neglected: the internal mammary is seldom mentioned in this connection, in spite of the fact that it lies so near the surface of a part so liable to injury as the front of the chest. Any one who has tried on the dead subject to ligate this artery between the costal cartilages knows what a work of chance it is. Let the chest be in constant respiratory movement, as in life, and the difficulty becomes practically insurmountable; yet we can easily see that a stab-wound in the chest may, on short notice, demand the tying of this vessel by any man in the medical profession. The following method is simple, easy, comparatively safe, and quickly performed: The artery lies about a finger's-breadth outside the sternal border; a longitudinal incision, with its centre at the above-mentioned point, is made on the costal cartilage; by this the integument fascia and perichondrium are divided. The integuments are now drawn aside by retractors, fully exposing the cartilage. Two transverse incisions are made in the perichondrium, so as to free half or three-quarters of an inch of that structure. This is now carefully stripped down from the sides by a raspatory, and the instrument carefully carried round between the perichondrium and cartilage, underneath the latter. A portion of the cartilage corresponding in extent to the freed surface is now cut through at both ends on the raspatory and gently lifted out, when the artery may be plainly seen lying between the perichondrium and pleura. The former is carefully scratched through with the point of a director, and the vessel ligated. This operation gives abundant room and a clear sight of the vessel, rendering the danger of injuring the pleura very slight in the hands of a careful surgeon. J. H. D.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL

Dislocation and Fracture of Metatarsal Bones of both feet—Immediate application of Plaster-of-Paris bandages—Excellent result. (Under the care of Dr. F. J. SHEPHERD.)

(Reported by DR. H. S. BIRKETT, House-Surgeon.)

E. Le J., aged 22, bricklayer, admitted 25th June, 1886, suffering from injuries to both feet. The same morning, whilst working on a scaffold, patient struck the roof of the house with a board which he was carrying, throwing him a little backwards; this caused him to step off the scaffolding, and he fell, alighting on his toes upon a heap of stones and dirt, a distance of 20 feet. Upon examination, the following was the condition of the feet:

Left Foot—Large painful swelling extending from external and internal malleoli behind, forwards to the metatarso-phalangeal articulations. Plantar arch not well marked, foot being rather flat. Slight foreshortening. Find the 1st, 3rd and 4th metatarsal bones dislocated upwards, backwards and inwards, the bases being distinctly felt beneath the skin, their prominence being obscured by the great swelling present.

Right Foot—Dorsum swollen moderately, and to same extent as left foot. Plantar arch lost; 2nd, 3rd and 4th metatarsal bones dislocated upwards, backwards and inwards, the bases being easily felt beneath the skin. Crepitus felt over the dislocated metatarsal bones of both feet.

Under ether, the dislocations were easily reduced, the fragments kept in position by pressure with absorbent cotton, and both feet put up in plaster-of-paris bandages.

Next day there was considerable pain and swelling of both feet, though the circulation and sensation was good, therefore a strip a quarter of an inch wide was removed from median line of both splints, which were then kept in position by bandages.

The progress of the case from this day until two weeks after exit (17th July), when patient returned to report himself, and on examination, has no pain or tenderness in feet; walks quite naturally.

Three Cases of Sciatica—Nerve-stretching—Cured.

(Reported by DR. H. S. BIRKETT, House Surgeon.)

CASE I.—Under the care of Dr. F. J. SHEPHERD.

P. C., aged 40, maltster, admitted 21st June, 1886, complaining of pain in left thigh and leg. Last March, began to complain of a sharp, intermittent pain in left lumbar region, and extending down thigh and leg of the same side, brought on by exposure to varying temperatures which his occupation calls for. The attack was non-febrile. The pain was increased by exercise and lifting heavy weights, severe enough to prevent patient from sleeping, and affected his walking so that he has been lame ever since. Was compelled to give up work since attack set in. Muscles of thigh and leg have wasted very much. Treatment received was without any relief. Always healthy; no specific history; habits intemperate.

Present condition—Patient is a fairly well developed and healthy-looking man. Walks with a very marked limp in left leg, body being bent over to that side. Upon examination, left leg is found to be tender and painful along the course of the sciatic nerve and up its branches, extending downwards as far as the calf of the leg. This pain is increased by movement of the limb. Muscles soft, flabby, and much wasted, the thigh being three-quarters and the leg half an inch smaller than the right. Heart and lungs negative.

On the 23rd of June, patient was etherized and an incision two inches long made in upper third of thigh, posteriorly, bringing the belly of the biceps at once into view; this being drawn to one side, the sciatic nerve was then found, and stretched moderately firmly from above downwards and from below upwards. The wound was next irrigated with a solution of bichloride (1–1500), the edges brought together by a continuous catgut suture, and a medium-sized drainage-tube introduced into lower end of wound; dressed with iodoform gauze and jute pad. The wound was subsequently dressed on the 2nd of July, and the drainage-tube and sutures removed, the edges of the wound well united. No redness or inflammatory signs about incision, and on the 10th July patient left the hospital, the pain and tenderness in leg having completely left, his gait quite natural and without limping, and the wound perfectly healed. The temperature since the day of operation until patient's exit fluctuated between 97½° and 98½°.

CASE II.—Under the care of Dr. G. E. FENWICK.

J. H., aged 24, carpenter, admitted 27th July, 1886, complaining of severe pain in the right leg. Five months ago took cold through exposure, followed the next day by severe, sharp, and intermittent pains in right buttock, extending downwards to the knee, of such severity as to cause the gluteal muscles to contract into a lump, and prevent the patient from sleeping. The pains were worse at night, and aggravated by exercise. Within the last three weeks the pain has extended to the toes, and thus caused a decided limp when walking. Has received no treatment. Has always enjoyed good health. Says that his mother suffers from the same complaint as he does.

Patient is a strong and healthy man. His gait is markedly affected, the right leg being flexed at an obtuse angle, so that he walks with a limp and the body bent to the right side. Upon examination, find tenderness along the whole course of the sciatic nerve, and not exaggerated at any particular spot. Movement of leg increases the pain ; no wasting of the muscles.

On the 30th July, patient being etherized, a straight incision, two inches long, was made in upper third of the thigh, posteriorly. Through the incision the external edge of the biceps was found and the sciatic nerve brought into view. The nerve was well stretched both from above downwards and below upwards. The wound was well irrigated with bichloride solution (1–1500), a medium-sized drainage-tube introduced, edges of wound brought together by a continuous catgut suture, and dressings of iodoform gauze and jute applied.

The next day after the operation the patient complained of tingling and a sensation of numbness in the leg, extending anteriorly and posteriorly from the knee-joint downwards to the toes. The pain in the leg the night previously was rather severe ; relieved by ½-grain of morphia hypodermically. Temperature, 99½°. Three days after the operation, the wound was dressed, when the following condition was noted: No redness or swelling about line of incision; edges well united; no purulent discharge; drainage tube removed and dry dressings reapplied; temperature 98½°; tingling and numbness less marked; slight paresis of extensors of foot.

On the 4th of August the dressings were left off, the wound being completely healed, and the patient up and walking about with a decided improvement and without pain. On the 7th, patient was discharged, his gait being quite natural and unattended with pain. Paresis of the foot had almost disappeared.

CASE III.—Under the care of Dr. G. E. FENWICK.

N. McL., aged 24, farmer, admitted 15th July, 1886, complaining of pain in left hip and leg. Began two years ago with dull, intermittent pain in left buttock, extending down the back of the thigh to calf of leg. The pain is worse in the morning, and increased by exercise; often severe enough to prevent him from sleeping, and has caused him to walk lame. Has always been able to attend to his work. Has had liniment applied and hypodermic injections of morphia given, but without relief. Cause of complaint is assigned to exposure to cold and damp weather. Patient is a strong and healthy-looking man; has a slight limp in left leg when walking. Upon examination, the left leg is found to be very tender on pressure throughout the whole course of the sciatic nerve. The muscles of the affected leg are much wasted, the middle thirds of the thigh and leg being 1 and a ¼ inch respectively smaller than the right leg.

On the 20th July, patient being etherized, a straight incision 3 inches long was made in the middle third of the thigh, posteriorly; the sciatic nerve was brought into view by drawing the biceps aside, and then moderately stretched from below upwards and above downwards. Bichloride irrigation (1–1500) was used, medium-sized drainage-tube inserted, edges of wound brought together by non-continuous catgut suture, and dressings of iodoform gauze, and jute applied.

The dressings were removed four days after the operation, when it was found that the wound had healed by first intention; small amount of healthy pus soiled the first layer of gauze. Drainage-tube removed. Dry dressings reapplied. Temperature 98½° to 99½°. On the 31st July patient was discharged from the hospital, being perfectly free from pain and walking quite naturally. The wound had completely closed. Temperature 98½°.

Reviews and Notices of Books.

Diseases of the Digestive Organs in Infancy and Childhood. With chapters on the Investigation of Disease and on the General Mangement of Children.—By Louis Starr, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, &c. With colored plates and other illustrations. Philadelphia: P. Blakiston, Son & Co.

Always present with us, at certain seasons of the year, the digestive disturbances of children quite frequently assume a very marked predominance over all others. For their successful management they require a sufficient knowledge, not alone of the general clinical features of their various forms, but also of the general regulation of an infantile hygiene and therapeusis. It is a subject which necessarily occupies a considerable space in the text-books, but still, its importance is such that it is well deserving of being treated of in special monographs. The affections of the alimentary canal in all its parts are here treated of systematically, and markedly so from a clinical standpoint, the whole forming a very excellent guide and general book of reference in its own department. The directions upon general management are very appropriate, and are sure to prove useful to any young practitioner in search of an instructor in the regimen of the nursery. The book makes a handsome library volume, but we have looked in vain for the colored and other illustrations announced in the title-page,—the only specimens we have been able to find being a pair of tongues on one page, some verminous eggs on another, and a cut of a feeding-bottle at the end of the book!

The Healing of Arteries after Ligature in Man and Animals.—By J. COLLINS WARREN, M.D., Assistant Professor of Surgery, Harvard University; Surgeon to the Massachusetts General Hospital; Member American Surgical Association; Honorary Fellow Philadelphia Academy of Surgery. New York: Wm. Wood & Co.

In 1883 Dr. Warren read before the Boston Society of Medical Sciences a provisional report (which was afterwards published in pamphlet form) "On the Healing of Arteries after Ligature." The present volume represents the completed work of which the provisional report was a mere note. Dr. Warren is to be congratulated on the valuable character of his work, which is the result of years of careful experiment and patient investigation. According to Dr. Warren, the duration of the process of repair after the ligature of arteries is much longer than has been hitherto thought; for large arteries it ranges from three to six months. The nature of the healing process is very complicated. The author states that the healing of arteries takes place much as does repair of broken bones; provisional structures are thrown out "which seal the vessel, while the coats gradually elaborate those elements which are to form part of the future cicatrix." The greater part of this callus is derived from the middle coat, and when the callus disappears, there is a renewing cicatrix which closely resembles the three coats of the artery. Contrary to the usual opinion, the muscular cell was found to be an essential feature of the arterial cicatrix. No evidence was found in the experiments performed to justify the belief that arteries ever unite by first intention. The author does not believe that a human artery can be tied and heal without the formation of a thrombus, the latter protecting the wound and being a good culture medium for granulation cells in its deeper portions. With regard to the kind of ligature, it has latterly been thought necessary to employ a substance which can be easily absorbed, and catgut or other animal substance was used, but in reality this is of little consequence, for it is now known that silk and hempen ligatures can become either encysted or absorbed. When one end of the ligature is left uncut, or suppuration takes place, the surrounding callus is imperfectly developed (for it follows the uncut ligature), and secondary hemorrhage is liable to take place. When the ligature is cut short, the callus surrounds and encysts it, and if no suppuration takes place, it is afterwards absorbed. The author says: "The prime object, therefore, to be obtained, is to employ such methods as will interfere as little as possible with the natural sequence of events which follow one another during the process of repair under the most favorable conditions; when the ends of the vessel are once sealed by the formation of an external ring of callus, and the rest of the wound is promptly healed by first intention, all danger of hemorrhage is avoided. The rules of antiseptic surgery supply us, therefore, with a more certain method of securing this desirable result than any other plan which up to the present time has been proposed."

We have here presented the principal points treated of in the book in a very superficial way, but we trust we have conveyed to the reader some slight idea of the great importance of the work accomplished by Dr. Collins Warren. The first chapter is devoted to a full and elaborate history of the ligature, then follow chapters on experiments on animals, observations on the human subject, and an account of the closure of the fœtal vessels. At the end of the work is a full bibliography and a complete index. We heartily recommend this work to all scientific surgeons and others interested in surgical pathology, and we trust that Dr. Warren will not rest on his laurels, but devote his attention to the many other vexed points in surgical pathology.

A Manual of Midwifery.—By ALFRED LEWIS GALABIN, M.A., M.D., Obstetric Physician and Lecturer on Midwifery and the Diseases of Women to Guy's Hospital, &c. Illustrated with 227 wood engravings. Philadelphia: P. Blakiston, Son & Co.

One of the clinical manuals in course of publication by the Blakiston firm. It will be found that its teachings correspond with those of the best instructors of modern times. It contains a complete exposition of the science and art of midwifery compressed into such space as does not extend it beyond the reasonable dimensions of a good manual or text-book. The style is particularly clear, and the explanations of the mechanism of labor in accordance with the various positions of the fœtus are specially commendable. We think that when it becomes sufficiently known, Dr. Galabin's manual will become a favorite amongst all students and practitioners.

A Manual of Practical Therapeutics considered with reference to articles of the Materia Medica. By Edward John Waring, C.I.E., M.D., F.R.C.P., Lond. Edited by Dudley W. Buxton, M.D., B.S., Lond., M.R.C.P., &c. Fourth edition. Philadelphia: P. Blakiston, Son & Co.

This is another of the same series of manuals, and is a late edition of a well-known standard on therapeutics. The articles of the materia medica are arranged in alphabetical order, and accompanied by accurate descriptions of their several physiological actions and therapeutical uses, numerous references being given to authorities by whom these statements are substantiated. The compilation has been made with the greatest care, and the most modern views as to the value of the various drugs have evidently received careful attention. It can be highly recommended to all practitioners and students of medicine.

A Treatise on the Diseases of the Nervous System. By William A. Hammond, M.D., Professor of Diseases of the Mind and Nervous System in the New York Post-Graduate School and Hospital, &c. Eighth edition, with corrections and additions. New York. D. Appleton & Co.

The preface to the edition states that the work "has continued to receive approval, at home and abroad, to an extent beyond that ever given to any other work of like scope and objects published in any part of the world." Being one of the standard exponents of neurological teaching in America, it is always in demand, and we require only to draw attention to the issue of this new edition. One entirely new chapter has been added, which contains matter of considerable interest. It is entitled

"Certain obscure diseases of the Nervous System," and deals chiefly with tetany, Thomsen's disease, and Miryachit and its kindred affections.

Text-Book of Ophthalmoscopy.—By EDWD. G. LORING, M.D. Part I.—The Normal Eye; Determination of Refraction; Diseases of the Media; Physiological Optics and the theory of the Ophthalmoscope. New York: D. Appleton & Co.

A handsome volume of 259 pages, in six chapters, and a voluminous appendix. The entire work has been produced in the very best style, and is copiously illustrated. There are also three beautifully-executed colored plates, representing physiological and deviations from the ordinary physiological ophthalmoscopic appearances. A work of this kind cannot, of course, contain much that is new to an expert in the science of ophthalmology; the difference, however, between a small elementary treatise on this subject (and there are many such) and the volume under consideration is, to say the least, somewhat striking. The chapters on the fundus of the normal eye are admirably worked up, and present all the features of this "storehouse of physiology" in the clearest possible light; a thorough study of these will do all that the accumulated experience of others can do to enable the student to avoid the common errors of ophthalmoscopic diagnosis. They contain, in fact, a clear and concise explanation of all the knotty points in clinical ophthalmoscopy. In the ophthalmoscopic examination of the eye, and the study of the refractive media in their normal and pathological conditions, the greatest thoroughness is ensured, and the subject of refraction is treated in the masterly way that is worthy of an author who has won for himself well earned fame for his extraordinary skill in this particular branch of ophthalmic science.

The appendix deals with the elementary principles, or what might best be defined as the optics of ophthalmoscopy. To the beginner imbued (as most beginners are) with an exaggerated idea of the difficulties to be encountered in learning to use the ophthalmoscope, a study of this portion of the work would be equivalent to transforming an irksome task into a delightful recreation. The illustrations both in text and diagram are always clear and to the point; nothing essential has been omitted and nothing superfluous included. The advice given as to choice of instruments to be employed is thoroughly practical and judicious. We know of no text-book of the kind at all so well adapted to meet the wants of beginners or advanced students in every particular as this one, for facilitating the acquirement either of a smattering of the subject, or for making it a profound study, the author has succeeded in presenting the subject in the most thoroughly practical and attractive form.

Outlines of Lectures on Physiology. With an Introductory Chapter on General Biology and an Appendix containing Laboratory Exercises in Practical Physiology.—By T. Wesley Mills, M.A., M.D., L.R.C.P., Eng., Professor of Physiology, McGill University, Montreal. Montreal: W. Drysdale & Co.

This work is an elaborate outline of the course given on physiology by Professor Mills in the lecture-room and physiological laboratory of McGill University. It proves, if proof were needed, how entirely different is the teaching of physiology to-day compared to what it was even ten years ago, and how impossible it is for any teacher to attempt the teaching of this subject who is not a pure physiologist simply, but also one who has had a careful and extensive training in the modern methods of physiological research. The time has fortunately passed, for the cause of scientific medicine, when the teaching of physiology in medical schools can be conducted by any practitioner at a few weeks notice. It opens with a chapter on general biology, followed by one on the chemical constitution of the body. Then in order we have in detail the blood and lymph, the contractile tissues, the nervous tissues, the circulation of the blood, respiration, digestion, the excretory processes, metabolism, etc. As might be expected, the part dealing with the circulation of the blood is one of the ablest in the work. After some general anatomical and physiological considerations, the physics of the circulation are clearly and concisely considered, followed by paragraphs on the velocity of the blood-current, the pulse, the work done by the heart, the intracardiac blood-pressure, the sounds of the heart, the mechanism and modifications of the heart-beat, inhibition of the heart, regulation of the blood-pressure, regulation of local blood supply, and vaso-motor reflexes. Reference is also made to the recent work on the circulation, a field in which Prof. Mills has done some lasting original work. This chapter concludes with an account of the different demonstrations employed by the author in illustrating his lectures on the physiology of the circulation. The work concludes with a description of the class laboratory exercises in food-stuffs, artificial digestion and animal liquids as practised in the physiological laboratory of McGill University. The student will find Prof. Mills' manual of great service. The publishers have performed their part in a very creditable manner.

Books and Pamphlets Received.

HANDBOOK OF DISEASES OF THE EAR. For the use of Students and Practitioners. By Urban Pritchard, M.D., F.R.C.S. With illustrations. London, H. K. Lewis.

A TREATISE ON ELECTROLYSIS, and its application to Therapeutical and Surgical Treatment in Disease. By Robt. Amory, A.M., M.D. New York, Wm. Wood & Co.

MANUAL OF DIFFERENTIAL DIAGNOSIS. By Condict. W. Cutler, M.I., M.D. New York, G. P. Putnam's Sons.

SPASM IN CHRONIC NERVE DISEASE. By Seymour J. Sharkey, M.A., M.B., Oxon, F.R.C.P. London, J. & A. Churchill.

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. Vol. III. F A C to N Y S. Edited by Albert H. Buck, M.D. New York, Wm. Wood & Co.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADEPHIA. Third Series. Vol. VIII. Philadelphia, P. Blakiston, Son & Co.

TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY. Vol. X. For 1886.

MASSAGE AS A MODE OF TREATMENT. By Wm. Murrell, M.D., F.R.C.P. London, H. K. Lewis.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, June 11th, 1886.

T. G. Roddick, M.D., President, in the Chair.

Lupus of the Feet.—Dr. R. J. B. Howard again exhibited the boy shown at a previous meeting, to show the effect of treatment. The history of the case is as follows: Boy aged 12, good family history, was brought to the Dispensary on account of a cough. He was found to have bronchitis, which improved under treatment. Dr. Howard was asked to see his feet, which were said to be "breaking out" on the skin. He has angular curvature, involving the lower dorsal region. First noticed when 3½ years old. His feet were first affected in his sixth year. A small "scurfy" spot appeared on the right foot, spreading steadily, and healing at centre. When seen, it appeared as a serpiginous patch, about 4 inches across. On the right ankle and instep, smaller similar patches were seen, also on outside of right little toe and left great toe at metatarso-phalangeal joint. The patch was covered with a crust or scab of somewhat papillary appearance. No pain or tenderness, and never ulcerated. Such was the condition when brought before the Society on May 1st. Following the advice then given, he ordered poultices to remove the crusts, when the appearance presented was that of a typical cutaneous lupus. The acid nitrate of silver was then applied to each tubercle. Great improvement was evident.

Extirpation of the Uterus per Vaginam for Epithelioma.—Dr. Perrigo related the case as follows: R. B., aged 31, unmarried, but had an illegitimate child ten years ago. Family history good. Father dead from cardiac disease. Mother is still living. Has four brothers and four sisters, all living and healthy. Patient began to menstruate at 13 years old; was always regular. Felt perfectly well after her confinement. Four years ago had an illness which kept her in bed for two or three weeks, the most prominent symptoms of which were severe pains in both legs, from the hips downwards. While convalescing, had some uterine hemorrhage, occurring in the interval between the menstrual periods. About two years after this illness she began to menstruate more profusely and more frequently until, during the last year, she was " unwell all the time." Consulted several physicians, without receiving any benefit. No examination had been made by them. Never complained of any pain in connection with the hemorrhagic discharge. During last winter her health and strength suddenly began to fail. In the spring she entered the Western Hospital. When examined, the presence of epithelioma was discovered, involving the cervix and a very small portion of the vagina next to the anterior portion of the cervix. Pacquelin's thermo-cautère was thorougly applied on two occasions, but with only temporary benefit. It was then decided to extirpate the uterus per vaginam, as there was a capacious vagina, and, besides, the whole disease could be removed. Drs. Hingston, Kennedy and Rowell were the assistants. A horizontal incision was made in Douglas's pouch, enlarged by the finger, the uterus retroverted, after which a ligature was placed around the organ at the junction of the cervix with the body. This was done for the purpose of traction. The after steps of the operation consisted in taking up a certain portion of tissue with a threaded aneurism-needle, tying, and then dividing with scissors. Both Fallopian tubes were divided in the same way. After removal, a circular opening was left at the upper end of the vagina, through which a small loop of intestine could be seen, but which did not come down. Three sutures were put in to draw the edges of the vagina together, and rubber tubing to facilitate drainage. The bladder was uninjured, and there was hardly any hemorrhage during the operation. Excepting some vesical catarrh, recovery was uninterrupted. The patient left for home six weeks after the operation.

Dr. Rowell exhibited the uterus.

Dr. Cameron said the patient came to him at the out-door department of the Western Hospital. She complained of hemorrhages lasting over a year. An examination revealed this malignant disease. She did not suffer any pain.

Dr. Gardner said that hemorrhage was a very constant symptom of malignant disease. He, however, mentioned a case he had seen with Dr. McCallum, where the only symptom was leucorrhœa. Menstruation was normal, and there was absence of pain. On examining, a rapidly-growing mass the size of an egg, involving the cervix, was found. This was removed with the knife and scissors, and chloride of zinc applied. He had never removed a uterus per vaginam. Dr. Schröder has good success, but it was not yet decided which operation was best for prolonging life.

Dr. R. J. B. Howard said that absence of symptoms in these cases was remarkable. He knew of a case where a woman consulted a doctor for bleeding piles, and it was found she had a large cancerous mass involving the uterus. She had no symptoms whatever.

Dr. Hingston said the practical question was, should we operate or not? He was in favor of operating if the disease be confined to the uterus or involving as much vagina as can easily be removed. If the broad ligaments are diseased, or if the vagina be much infiltrated, he would not operate. He was in favor of removing per vaginam, because the shock was less and hemorrhage less.

Dr. Shepherd said the operation in a suitable case was as justifiable as removing the rectum or tongue.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Regular Monthly Meeting, August, 1886.

Dr. Stark, President, in the Chair.

(From our own Correspondent.)

Dr. Malloch exhibited a specimen of a soft catheter which he had removed from a patient. The patient had been using a soft catheter for some time, and one night, from some cause or other, he allowed the catheter to slip into the bladder. Not thinking anything serious would result, he allowed it to remain in the bladder for six or seven days. Dr. M. was called to see the patient, and introduced a lithotrite with the object of removing the catheter; this proved ineffectual. He then performed the operation of median lithotomy, and removed the catheter with a pair of forceps. From the length of time the catheter had been in the bladder, it was covered with a considerable deposit, which would have rendered it dangerous to remove it by the urethra.

Dr. Malloch also exhibited a specimen of a calculus from the pelvis of the kidney. Patient had been suffering for about 15 years, and had been operated upon for stone in the bladder. He first saw the patient ten years ago; she then had a fistulous opening. One year ago he probed the opening and detached a stone; five months ago it was removed.

DRS. ROSEBRUGH, MULLIN and MCCARGOW took part in the discussion and related cases which had come under their notice.

DR. STARK related two cases of puerperal eclampsia treated by the hypodermic injection of pilocarpine.

A lengthy discussion followed, in which DRS. LESLIE, MALLOCH, MULLIN, WHITE, SHAW and RIDLEY took part.

Regular Monthly Meeting, Sept. 7, 1886.

DR. STARK, PRESIDENT, IN THE CHAIR.

DR. H. S. GRIFFIN exhibited a specimen of cancer of the stomach from a negro-woman, about 65 or 70 years of age. Had six or eight children, all of whom are dead. When Dr. Griffin first saw the patient she complained of constant and troublesome spitting of water, which also escaped from the mouth during sleep. There was also regurgitation of fluids after drinking. Had been losing flesh rapidly. At one time raised a quantity of pus, about a pint. The post-mortem revealed general thickening of the walls of the stomach. There was a narrowing of the œsophagus near the cardiac orifice of the stomach, not a complete stricture. Several fibroid tumors of the uterus was the only other abnormality found.

DR. MULLIN related a case of a woman who had been suffering for two or three years. At the time he saw her she had had no medical attendant for some months. On making an examination, found two or three lumps in right iliac region, extending upwards about twice as large as the thumb, and moveable; could not be fixed; sometimes disappeared altogether. Post-mortem—Stomach: walls dilated and very thin; greater curvature reached as far as the umbilicus. There was much thickening of the pyloric orifice, the opening being about the size of a small catheter. No evidence of secondary deposit in any other organ. The descending colon had a mesocolon fully six inches in length, and the bowel was loose and floating—a condition which would have rendered the operation of colotomy difficult, if not dangerous. The uterus was exhibited; right ovary normal, but the left ovary had the remains of a cyst which had collapsed. A band extended from the omentum, near the transverse colon, about the situation of the pyloric orifice of the stomach, looped around the head of the ascending colon and cæcum, and passed over to the left ovary, where it was attached, forming nearly a half circle. The tumors mentioned above are supposed to have been formed by this band retaining fæces in the intestines, at times being moveable, and then disappearing, as already stated on examination.

A committee consisting of Drs. Malloch, Mullin, Macdonald, White, Leslie and Griffin was appointed to report on the pollution of the waters of the bay by drainage and the best remedy for the evil.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Epidemic of Scarlatina caused by the Milk of diseased Cows.—An epidemic of scarlatina recently appeared in three districts in London, all of which were supplied with milk by the same company. In a fourth district, which was also supplied by the same firm, the disease did not appear. Upon inquiry it was found that the cows belonging to this company were kept in three separate stables. In two of them were three cows which had been recently purchased, and which were evidently sick. The nature of the disease was not known, but upon their udders were vesicles and patches of ulceration. The milk from the two infected stables was all distributed to the three districts in which the scarlatina had appeared. The fourth district was supplied from the third stable, in which all the cows were apparently healthy. Shortly after this the milk from the infected stables was furnished to the inhabitants of a neighboring village, but without the knowledge or consent of the company. Scarlatina also appeared in this village within a few days, though previous to that time no cases were known. At the stables the disease developed among other cows, including those which furnished the milk to the district which had not been visited with scarlatina up to that time. The result was the appearance of the disease in this district also. After the sale of this company's milk had been entirely stopped, the disease began to disappear, and no new cases, at least from this source, developed. These facts are important, and may have a bearing upon the development of other epidemics.—*Archives of Ped.*

The Management of Placenta Prævia.—Malcolm McLean, in a recent article on the management of placenta prævia, thus concludes :—

1. In any case, avoid the application of all chemical styptics, which only clog the vagina with inert coagula, and do not prevent hemorrhage. At the very first, the patient should be put in a state of absolute rest, body and mind, and a mild opiate is often desirable at this stage, to quiet irritation.

2. Inasmuch as the dangers from hemorrhage are greater than all else, to both mother and child, at the earliest moment preparations should be made to induce premature labor, and labor being once started, the case should be closely watched to its termination by the accoucheur.

3. In primiparæ and mothers with rigid tissues, the vagina should be well distended, by either the colpeurynter or tampon, as an adjuvant to the cervical dilatation.

4. In the majority of cases, and in all cases, especially where there is reason to believe that rapid delivery may be required, it is more safe to rely on the thorough, continuous, hydraulic pressure of a Barnes' dilator than on pressure on the fœtal parts.

5. Where the implantation is only lateral or partial, and where there is no object in hurrying the labor, bipolar version, drawing

down a foot and leaving one thigh to occlude and dilate the os, may be practiced, according to the method of Braxton Hicks, except in cases where the head presents well at the os, when,

6. The membranes should be ruptured, the waters evacuated, and the head encouraged to engage in the cervico-vaginal canal.

7. In the majority of cases, podalic version is to be preferred to the application of the forceps within the os.

8. In some cases, in the absence of assistance or the necessary instruments, the complete vaginal tampon, in part or wholly of cotton, may be applied and left *in situ* until (within a reasonable time) it is dislodged by the uterine contractions and the voluntary efforts of the mother. In case of favorable presentation—occiput or breech—the tampon will not materially obstruct the descent of the child, and in some cases the tampon, placenta and child will be expelled rapidly and safely without artificial assistance.

9. The dangers of septic infection by means of the tampon or indiarubber dilators are so slight, if properly used, as not to be considered as seriously impairing their great value.

10. Whenever it is possible, dilatation and delivery ought to be deliberately accomplished, in order to avoid maternal lacerations.

Finally. As cases of placenta prævia offer special dangers from post-partum hemorrhages, septicæmia, etc., the greatest care must be exercised in every detail of operation and nursing to avoid conveying septic material to the system of the mother. —*Amer. Jour. of Obstetrics.*

Professional Responsibilities.—One of the most difficult part of a physician's duties, ond one which demands all the tact and judgment he can bring to bear, consists in determining the course to pursue when certain diagnoses have been arrived at. A woman who believes herself to be suffering from some trifling and passing ailment, is shown to be the subject of carcinoma ; a patient with a supposed simple sore on his lip has epithelioma ; or a person apparently in good health is found, on examination, to be the possessor of some form of cardiac disease, not only unsuspected, but, it may be, unfelt. The physicians of "chest hospitals" know as well as any the difficulty of deciding whether to reveal the true nature of the case, or to leave the patient in a state of ignorance, which, after all, is comparative bliss. Of course, the plan adopted is modified according to circumstances. Affections such as epithelioma, where surgical intervention is imperative, are naturally explained without reticence; for the more fully the patient understands his position, the more disposed will he be to acquiesce in the necessary remedial measures. The real difficulty lies in those cases, such as cancer or heart-disease, where little or nothing may be practicable for their relief, but where a fatal termination is either inevitable or to be feared.

In the discussion at the Brighton meeting on the duration of life with heart-disease, Dr. Bristowe made some very excellent and apposite observations on this subject. "It is," he said, "quite early enough, in my opinion, for a man to know that he has heart disease when he begins to feel the effects of it"; and with this sententious remark most practitioners will agree. Incalculable harm has often been done by the abrupt announcement that a patient has cancer, or that another has heart-disease; and the evil is aggravated by the fact that, as in all other human affairs, the diagnosis may be wrong, or the prognosis may not be realized. Sir Andrew Clark told a very amusing but instructive anecdote of his having been called to see a gentleman suffering from bronchitis, who, fifty years before, had been precipitately superannuated on full salary, on the announcement by the medical officer to an insurance company that he was the victim of an incurable form of heart-disease, and would probably not live more than six months. Dr. Bristowe, in expressing the belief, backed by the hope, of his own freedom from "murmurs," sturdily declared that nothing short of acute and pressing circumstances would induce him to give any of his colleagues the opportunity of disturbing his equanimity by such an announcement. The best plan to pursue in such cases is undoubtedly to discharge the responsibility of the knowledge so obtained on to the shoulders of a near and trustworthy relation or friend.

Simple silence is apt to lead subsequently to the imputation of ignorance; and, for the sake of both the practitioner and the patient, it is desirable that cognizance should be taken of the actual condition of the latter, even when no immediate bad results are to be anticipated.—*British Medical Journal.*

Case of Congenital Absence of the Ostium Vaginæ, and delivery by the Anus. —Dr. J. F. T. Payne of Texas reported this remarkable case to the American Medical Association, as follows:—

On April 24, 1885, late in the evening, Dr. Geo. S. Sykes of Galveston was called to attend Mrs. H. T., who was in labor. She was 35 years old, and bore every sign of perfect physical development. The midwife said she had been in labor since the preceding midday. The bag of waters had been ruptured early in labor, and the patient was very much prostrated by her protracted and inefficient efforts to expel the fœtus. Examination revealed entire absence of the vaginal orifice, and the finger, passed along the perineum, sank into the distended anus, and encountered the fœtal head just within the opening. The anus was dilated to about the diameter of three inches. Never having met with such a case, the attending physician sought the advice of Dr. Payne. Examination confirmed the diagnosis. The fœtal head was found within the rectum, arrested at the distended and resisting anus. A clammy skin, sighing respiration, rapid, feeble pulse told the story of strength wasted by a fruitless labor. Uterine inertia; the anus, though considerably dilated, was insufficiently so to admit the passage of the head, and was rigid and unyielding. The indications were too clear to admit of a doubt as to the treatment. Chloroform was administered, a Simpson's obstetrical forceps applied with comparatively little difficulty, and by moderate effort the head was promptly delivered. The shoulder and trunk were brought into the world by a *vis a tergo*, exerted by squeezing and downward pressure on the uterus through the abdominal parietes. The placenta was speedily expelled by expression. There was no apparent laceration of the anal sphincters. There was no unusual hemorrhage at the time of the accouchement, nor was there subsequent oozing. Firm tonic contraction of the uterus quickly followed a dose of ergot. The anus regained its normal characteristics within a few hours. Subsequent treatment: Rest, and antiseptic irrigations *per rectum.* Patient sat up on the sixth day, and entered upon her accustomed domestic vocations at the end of the second week. On the 8th of October, five months and sixteen days after her accouchement, Dr. Paine examined the case thoroughly, and found complete absence of the ostium vaginæ. All the parts within the vulva presented the characteristics of virginity—the clitoris, normally developed and situated; the vestibule and posterior commissure bore no signs of having been stretched, distorted, or lacerated by childbirth; the urethra was in its proper place; the nymphæ and labia majora were in every respect natural in their virgin symmetry of outline. Two fingers were readily introduced into the rectum, and passed upward along the anterior rectal wall for a distance of about two inches, when it was clearly appreciable that the surface gradually sloped forward and upward, and merged into the anterior vaginal wall, which, at this point, was natural in its anatomical relations. From a half to an inch below the os uteri, could be distinctly felt the free edge of a membranous curtain which represented the upper third of the recto-vaginal septum. There was nothing abnormal either in the size or position of the uterus, or in its relation to the vagina. Examination with the speculum fully confirmed the revelation of the digital exploration. The most painstaking investigation failed to detect the slightest trace of cicatricial tissue. The conclusion was that the malformation was congenital. This woman has borne three children, all at full term, and well developed, but dead. The cause of death seemed to lie in the early drainage of the amniotic fluid and the protracted labor. Nothing noteworthy occurred during the day of the accouchement, except continuance beyond the ordinary limit, and the exhaustion which, as a natural consequence, ensued. Her labors had lasted, she said, about two days; but had not, in any case, been followed by fever, pain, abnormal discharge, or other evidences of inflammatory action.

Her recoveries had been uniformly short: sitting up on the sixth day, and resuming her ordinary duties at the end of the second week. Menstruation has always been regular (except during pregnancy) and painless. Sexual desire and its gratification during coitus were in every respect satisfactory. She had never been made aware, either by the exit of the menstrual flux, the method of sexual intercourse, or even the strange manner of her accouchement, that she was different from other women. Her husband, after being closely questioned, asserted most positively that he had never entertained the faintest suspicion that there was anything the matter with his wife out of the usual order of things.—*Medical News.*

Chloride of Sodium in Bright's Disease of the Kidneys.—Dr. Memminger, in a recent article detailing cases of Bright's disease successfully treated by chloride of sodium, urges a thorough trial of this therapeutical agent by the profession on the following grounds:—1st, It is harmless, if properly administered. 2nd, Its effects are comparatively uniform, provided it is given for a sufficient time; that I have so far used it only in chronic cases of not long standing does not, in my opinion, militate against its beneficial effects, for even should it not be found a cure for Bright's disease, may it not become an important article in our medical armamentarium, indeed, if only an ameliorator of man's sufferings and a prolonger of his life? 3rd, It may be employed as an adjunct to all recognized methods of treatment, without detriment to the patient"—*N. Y. Med. Journal.*

A New Method of taking Temperature in Children.—The difficulties in taking the temperature in children are but too well known, and an important symptom often fails of accuracy of record either because the child offers too much opposition, or because the mother cannot endure the crying of the child for the quarter of an hour during which the thermometer must remain in the axilla, or the five minutes during which it should be kept in the rectum. In cases of this kind the author recommends the use of a warmed thermometer which need be kept only for a moment in the axilla, and with which the fall and not the rise of the column of mercury is to be observed. The result will not vary by more than one or two hundredths of a degree from that which is obtained by the ordinary method. The thermometer may be warmed either by rubbing the bulb in the bare hand, or in a handkerchief, and 42°C. to 43°C. may be quickly indicated. It should then be quickly placed in the axilla and allowed to remain one or two minutes. The author has been satisfied with the experience which he has had with this plan up to the present time.—*Archives of Ped.*

The Physiology of Sleep.—The wonderful phenomena of sleep, to which a life-long familiarity has so accustomed us as to blunt our powers of observation, is, nevertheless, at once so interesting, so important, and so ill understood a subject that further information thereon cannot fail to be appreciated. The medical man, it is true, has generally, except in his own person, more to do with sleep as a diseased or absent condition, but in his endeavors to cope with a symptom which, like the pyrexia in fevers, may in itself determine a fatal result, he cannot but derive aid and assistance from a study of the details of the processes which precede, accompany and follow this condition.

Since attention was first turned to the investigation of the physiology of sleep, numerous contending and often absurd theories have been formulated with a view of accounting for its rhythmical occurrence, the unconsciousness in varying degrees which accompanies it, and its bearings on the economy. The very nature of the subject, however, seems to have predisposed those who devoted themselves to its study to leave the arid path of scientific research and deduction in favor of the more flowery and popular method of dishing up recitals of the weird and the extraordinary, as exemplified in those aberrations of varieties of sleep known as somnambulism, hypnotism, etc., and the result has been the publication of numerous treatises containing much that is both curious and interesting, but which from a physiological or pathological point of view are not of much value. The perusal of a really scientific work on the subject, however, only proves once more the truth of the adage that truth is stranger than fiction. To the methodical and careful observer, the proper means of research yield results which are incomparably more curious, and at the same time instructive, than the pseudo-facts with which some writers fill their books.

Each successive gradation in sleep is marked by the inclusion of the nervous system which is for the time being shut off, so to to speak, from participating in the general life function of the individual until, when the maximum intensity is attained, nothing is left but the purely animal—one might almost say the vegetative—life. Sleep of this degree of intensity, although a perfectly normal process, is not, in health, of long duration. After the lapse of a variable space of time, the systems one by one resume their function, until finally the sum of perceptions brings about the condition of awakening. As a natural consequence of these variations in perceptive powers, the character of the sleep is altered, according to the period. From the deep unconsciousness of complete repose, when every sense is in abeyance and the will rendered nugatory, the cerebrum is gradually aroused, first to the dim appreciation of the influences of external agencies, followed in due course by a return of perceptive power in the sensorium, and the cessation of sleep.

The brain shares in the need, which is everywhere apparent, of periods of rest. The products of cerebral activity accumulate more rapidly than they are eliminated, and a period arrives when the tissues are no longer able to do their work. The result is an invincible feeling of indisposition to exertion, physical or mental. The temporary and involuntary cessation of activity is at once followed by a diminution of the blood supply; the anæmia so induced being, therefore, a consequence, not a cause, of the state of repose. The various parts of the nervous system are not all involved simultaneously or to the same extent. The centres governing voluntary movement are the first to be affected, as seen in the nodding of the head and the closure of the eyelids; and the body, if not prevented, tends to assume the position of repose, determined by the laws of gravity. The special senses soon follow; but here, again, they are not abrogated *en masse.* Sight is the first to go, the stimulus no longer reaching that portion of the cerebrum where it can give rise to a definite sensation even where the closure of the lids has not shut off external stimuli altogether. Hearing and smell are remarkably persistent, and, except in the deepest sleep, may be said to be only dulled, and not extinguished. Everyone is familiar with the ease with which sleep is put an end to by unaccustomed noise even of slight intensity, or, better still, by the cessation of any monotonous sound, as, for instance, the awakening of travellers by rail or steamboat on any stoppage of the train or machinery. Instances are on record, too, where the inhabitants of a house have been roused simply by the smell of the tobacco indulged in by inexperienced or incautious burglars. The persistent sensibility of these senses may to some extent be accounted for by the fact that they are not shut off from communication with the outside world, as are, for example, the eyes.

To allow sleep, or, at any rate, quiet sleep, a certain harmony must exist in the condition of all the organs, which must, so to speak, be tuned to the sleep tone. If one organ be in a state of activity, or, on the other hand, its condition be abnormal in some other way, the sensorium refuses to abdicate its control. This is familiar to us in the case of cerebral activity, or cold feet at bed-time, both being inimical to sleep. Inasmuch, therefore, as insomnia may result from either set of causes, we can either employ drugs, such as opium, which act directly on the nerve-centres, and so bring about sleep; or, we may resort to medicines like hypnone, which is said to favor sleep, rather than induce it, by allaying the irritable or hyperæsthetic condition of certain organs or parts. In this way a little peppermint-water or brandy may be considered in the light of hypnotics, when taken for a nocturnal attack of stomach-ache. The pains of flatulence being assuaged, sleep comes as a matter of course. For this reason, many forms of insomnia are relieved by hot or cold douches, which stimulate or damp peripheral sensibility. The study of the causes and treatment of insomnia, however, does not enter into the compass of this article; but it is one which can only be satisfactorily pursued after competent knowledge has been acquired of the normal process in a state of health, undisturbed by flatulence, dyspepsia, or cerebral disorganization.—*Brit. Med. Journal.*

Ear Disease in Diphtheria and Scarlet Fever.—Dr. Thomas Barr, of the Glasgow Ear Hospital, concluded the clinical history of a case of scarlet fever, complicated with nasal and pharyngeal diphtheria, acute suppuration of both middle ears, rapid destruction of tympanic membranes, serious loss of hearing, facial paralysis, and abscess of the lachrymal sac, ending in recovery, with the following remarks :—" 1. This case bears out what Burckhardt-Merian has especially drawn attention to—namely, that scarlet fever, when complicated with or followed by diphtheria, is apt to give rise to a most destructive type of disease of the ear. It is probable that in such cases there is a real propagation of the diphtheritic membrane along the Eustachian tube to the tympanic cavity, and even to the external auditory canal. We have not simply to deal with an ordinary collection of purulent secretion in the tympanic cavity, with rupture of the membrane and evacuation of the pus ; we have rather to do with a rapidly destructive ulcerative process, which, as is shown by this case, denudes the organ of the tympanic membrane in a very short time. There is reason to believe that scarlet fever alone does not produce such havoc ; the addition of the diphtheritic poison seems to impart that destructive tendency to the ear complication which may terminate in deaf-mutism, or even lead to a fatal issue. 2. From the favorable course of the facial paralysis in this case, we need not despair of recovery from this complication of purulent disease of the ear. In children, not only is the facial nerve, as it lies in its osseous canal on the inner wall of the tympanum, in close juxta-position to the mucous membrane of the tympanic cavity, but the bony walls of this canal are very frequently defective when the neurilemma of the nerve is in actual contact with the mucous membrane. It is easy to understand how, with such an anatomical arrangement, the pressure of granulation tissue, swollen mucous membrane, or even of secretion, may produce paralysis of the facial nerve without ulcerative disease of the bone, and therefore without the same gloomy prognosis. 3. The recovery of fair hearing also illustrates a fact which is not unfrequently observed—namely, that fair hearing may exist even when the tympanic membrane is almost quite destroyed. What is of more importance than the presence of the tympanic membrane is a normal mobility of the fenestral structures. If these structures, with the staples, are not thickened, bound down by adhesion, or subjected to pressure, fair hearing power may be enjoyed, although the membrane, with even the malleus and incus, should have been swept away. 4. This case also shows in a striking way the value of treatment by rectified spirit in purulent disease of the middle ear associated with granular excrescences. The following is Dr. Barr's description of the treatment pursued in the case referred to above :—Diluted rectified spirit was employed in the strength of one-third of spirit and two-thirds of water. The following process was carried out every eight hours :—(1) Careful syringing with a warm solution of boracic acid ; (2) removal of all the moisture in the interior of the ear with absorbent cotton on a cotton holder ; (3) instilling into the ear fifteen drops (warm) of the diluted spirit ; (4) allowing it to remain in the ear, while the child lay on the opposite side for fifteen minutes ; (5) drying the canal with cotton, and then placing a plug of salicylicated cotton, in the orifice of the ear. This treatment was, of course, applied to both ears. In addition, and in order to ensure still more thoroughly the complex expulsion of the purulent secretion, Politzer's method of inflating the middle ear was performed once a day after the syringing. The nasal passages were also syringed daily with a tepid solution of chlorate of potash. The strength of the spirit was gradually increased to equal parts of water and rectified spirit, but when employed stronger than this the pain excited by it compelled us to return to the weaker form. This method of treatment very soon proved itself to be the most efficient. The discharge perceptibly diminished ; the granulation tissue began to shrink ; and the hearing power became more acute.—*Lancet.*

Contribution to the Study of the Pathology and Therapeutics of Diphtheritic Paralysis.—This thesis is based upon an analysis of 23 cases of diphtheritic paralysis. This accident may occur as a result of pharyngeal diphtheria of all varieties, whether benign or grave in character. It is the result of specific action of the infectious agent upon the nervous system. Pierrot explains the pathogenesis of this form of paralysis by supposing a concomitant diphtheritic meningitis; but this condition occurred in only three of the cases which were analyzed. Déjerine supposed that the paralysis was due to an anterior poliomyelitis, but this position is not tenable, for the gray matter of the cord in poliomyelitis is not inflamed but is degenerated, and the number of degenerated cells does not correspond with the severe lesions which the peripheral nerves have experienced. The great extent of the lesions of degeneration, as well in the peripheral as in the central nervous system, is explained by the fact that the diphtheritic poison can penetrate, in whatever way, to the nervous system. The peripheral nerves of persons who have died of diphtheria, without having shown any symptom of paralysis, will sometimes show a more or less decided degeneration of the nerve sheaths, or even of the contained nerve fibres. A predisposition to diphtheritic paralysis is sometimes quite noticeable in certain families. There is no particular symptom to announce the beginning of the accident. The velum of the palate is usually attacked first, its loss of power being either total or partial. The accident may last several days or several weeks, and is usually terminated by restored function.

Seeligmüller attaches the greatest importance to the treatment by electricity of diphtheritic paralysis. When the velum of the palate is affected, the constant current should be employed; the positive pole being placed upon the nucha, the negative under the inferior maxilla. If the muscles of the eye are paralyzed, the positive pole may be placed upon the nucha and the negative in the vicinity of the paralyzed muscles. If the extremities are affected, the positive electrode should be placed in the lumbar region and the negative over the motor and sensory nerves which are to be excited.—*Archives of Ped.*

Scarlatina Sine Exanthemata.—The author's experience in a number of carefully observed cases revealed the following. The patients which were seen were all between the ages of two and nine years, suggesting the idea that the first and second infancy had something to do with this anomaly as to the exanthemata. Fever was present as in the ordinary form of the disease, but did not go beyond 39°C. Angina also was manifest in connection with a rapid and febrile pulse. The angina was of a catarrhal or hyperæmic type, however, and was not attended with enlarged tonsils, nor with pultaceous or diphtheritic deposits. The tongue was red at the commencement of the disease, but there were no decided symptoms during the first few days of any grave internal disorder. The fever was of an intermittent character, of either the single or double quotidian variety. After these phenomena of the first stage of the disease have disappeared, a very important sign may be observed, namely, the presence of albumen in the urine. It may not be in large quantity at first, and may require the more delicate tests to discover it, such as picric acid, or the acid nitrate of mercury. Albuminous nephritis, whether medullary or cortical, with all its usual symptoms, constitutes the second stage of this disease, which is called the *white* form of the disease, as the skin is not colored red at any time during its progress. The renal lesion from the first appearance of albumen in the urine. This may happen within a few days of the first symptoms of the disease, or it may be deferred for a longer period, as in ordinary scarlatina. If the fever has remitted, it may appear together with the other symptoms of acute parenchymatous nephritis, reaching 40°C. or even a higher point. The urine is usually scanty as to quantity, dense, contains blood, much albumen, many epithelial cells, and epithelial casts. The quantity of urea is diminished, anasarca is quite general, and the serous cavities and especially the peritoneal contain much fluid. In addition, there are visceral disorders which are common to uræmia, and which vary as the lesions are in the nervous centre, the retina, the respiratory apparatus, the heart, or the gastro-intestinal tube. These symptoms, though serious, are not necessarily fatal; but the prognosis is less favorable when they occur in connection with a relapse which has made its appearance fifteen or twenty days after the appearance of the eruption. The treatment should consist of vapor baths, jaborandi, pilocarpin, and opium. The diet should be composed mainly of milk. Acetate of potash and quinine are also most useful for their diuretic and tonic effects.—*Archives of Pediatrics.*

Renal Irritation from Pure Terebene.—A correspondent writes to the *British Medical Journal* to ask his professional brethren whether they have ever noticed severe nephralgia and other evidences of renal irritation follow the use of "pure terebene." He has lately had under his care a case of bronchiectasis, in which he tried all the stock remedies, such as creosote, eucalyptol, iodine, phenol, iodoform, tar, sandalwoood oil, and lastly "pure terebene," to try and diminish the secretion and lessen the almost gangrenous odor of the sputa. He thinks he may safely say that they all practically failed to accomplish what he intended, even though the doses were pushed. "Pure terebene" was the last experimented with, and when his patient was taking from 20 to 25 minims four or five times during the twenty-four hours, he suddenly developed most intense nephralgia, the urine became scanty, high-colored, and distinctly albuminous. There had been traces of albumen before, but it was distinctly increased at this. There was no reason to suspect renal "colic" due to other causes. After the lapse of three weeks "pure terebene" was again begun to be taken, and as the doses were increased to the same quantity as before, a repetition of the nephralgic symptoms occurred, but less marked than before, and gradually a tolerance was established.—*Cincinnati Lancet-Clinic.*

Iodol in Gynæcological Practice.—Dr. Ménière has used iodol with good results in cases of granular degeneration and erosion of the cervix. He uses a solution containing—Iodol, 1 part; Glycerin, 15 parts; Alcohol, 30 parts. He has also used the solution with equally favorable results in a few cases of muciparous inflammation of the vulva in young lymphatic subjects.—*N. Y. Med. Jour.*

Tuberculosis of the Tongue.—There are two forms of lingual tuberculosis, the primary and the secondary, both of which are rare, but the former especially so. Secondary tuberculosis of the tongue is usually met with in the latter stages of pulmonary phthisis, and occurs in the form of superficial and dirty-looking ulcers, which are exceedingly painful and add greatly to the sufferings of the patient. The primary form is a very uncommon affection, or at least it is so considered, though it may be that this belief has arisen from mistakes in diagnosis, lingual tuberculosis having been regarded as carcinoma and reported as such. Dr. G. Feurer reports two cases of the disease in the *Correspondenz-Blatt für Schweizer Aerzte* of August 15, 1886, and the following description is taken from his article: The muscular tissue is very seldom the seat of tubercular disease, and this is the explanation of the freedom which the tongue enjoys, for of all muscular structures it is the one most frequently attacked. Primary lingual tuberculosis occurs usually in individuals who have acquired or inherited a predisposition to the disease, but who are as yet free from the specific lesions in other organs. In addition to a more or less characteristic, often granular, ragged, and dirty ulcer, there is a deep infiltration consists of a number of more or less sharply defined nodules, the size of a millet-seed, either isolated or lying closely together. Sometimes these become agglutinated into a whitish-gray, transparent, or cloudy mass, presenting an appearance like that found sometimes in tuberculosis of the testicle. Microscopical examination shows these nodules to be tubercles with all their histological characteristics. Tubercle bacilli are also present. There may, in certain cases, be such a marked swelling of the tongue as to completely fill the mouth, showing the marks of the teeth and interfering with speech and mastication, and presenting the picture of a subacute glossitis. At times there is fever of a hectic type, and the patient's general health becomes seriously depressed. There is usually considerable pain, which is increased by attempted mastication. The pain is, however, localized, and the radiating pains, to the ear and elsewhere, such as are commonly noticed in carcinoma, are absent. This is due, the author says, to the fact that while cancer spares no tissues, but invades all, nervous as well as others, while lie in its path, tuberculosis adheres to the connective-tissue spaces and affects the other tissues only indirectly in interfering with their nutrition. The submaxillary glands are infected in tuberculosis of the tongue, but they are never enlarged to such an extent as they are in carcinoma. The disease occurs probably by direct infection through wounds of the tongue, for if the bacilli were brought through the blood-channels, they would probably be arrested in other more predisposed organs. In both of the cases observed by Dr. Feurer there had been wounds of the tongue which did not heal, and in the immediate neighborhood of which the infiltration commenced. The treatment of lingual tuberculosis consists in the early removal of the diseased foci, and of the swollen glands in the submaxillary region. The prognosis is as yet unsettled. In some cases there has been no return of the disease, after a number of years, either in the tongue or in other organs. In one case of the author's the patient died, four months after the operation, of meningitis, apparently tubercular, though an autopsy was not made. Usually, when the lingual affection has not been removed the disease has in time attacked other organs, generally the lungs or intestines.—*New York Medical Record.*

Conception of Male Children at the time of the Post-menstrual Anæmia.—Dr. Camillo Fürst, of Graz, publishes in the *Archiv. für Gynæcologie*, 1886, Vol. XVIII, No. 1, p. 14, a contribution to the interesting and frequently-discussed question, When and how is the sex of the conception-product determined ? In the first section of the paper, which treats of "the time and causes of the determination of the sex in general," Fürst proposes certain maxims which, though not new, will interest our readers. According to the author we find a surplus of male conceptions in the working classes and country inhabitants as compared with the well-to-do people and the inhabitants of cities. Likewise, we can look for the surplus of male infants during hard times and the concomitant rise of food-prices, and before the ultimate extinction of a race. If a deficient nutrition of the procreators produces a surplus of male children, our author continues to argue, we can be certain that also the state of nutrition of the fecundated ovum, especially shortly after conception, will influence the sexual differentiation. And as after menstruation the vessels of the genital organs assume an ischæmatous character—forming the so-called post-menstrual anæmia — Fürst concludes that conceptions taking place immediately or shortly after menstruation will give a surplus of males on account of a relatively bad nutrition of the fecundated ovum. To strengthen his theory the author utilizes the statements of women confined in maternities, who mostly with an astonishing certainty could remember the end of the last menstruation and the day of conception. The statistics of the mentioned institutions show a very considerable surplus of male children for the first four or five days following menstruation, and a surplus of female ones for the succeeding period.—*Ther. Gaz.*

Clinical Studies of the Pupil.—Schmeichler has recorded the results of over 5,000 observations made upon the pupils of persons in health, of those suffering from acute and chronic diseases, and of the dying and dead. There were observed :

1. Pulsations of those vessels of the iris which are in direct connection with the intracranial vessels showed a systole and diastole occurring from sixty to eighty times in the minute.

2. A movement of the iris dependent upon rhythmic impulses from the vasomotor centre, occurring from two to six times per minute.

3. Protrusion and depression of the iris, coincident with respiratory movements. These correspond with the " spontaneous pupillar movements " described by the author. Such movements were noted during an attack of hystero-epilepsy in a girl of twenty-one years. In this case such variations in tne rhythmical movements of the iris occurred in the complete absence of pupillary reaction to light, and were coincident with the forced respiratory movement of the patient. The spantaneous pupillary movements were most marked in excitable, neuropathic individuals.—*Centralblatt f. kiln. Med.*, July 10, 1886.

CANADA

Medical and Surgical Journal.

MONTREAL, OCT., 1886.

THE PROVINCIAL MEDICAL BOARD.

The semi-annual meeting of the Provincial Medical Board was held at Quebec on the 29th ult. The meeting was an important one, as the committee upon the proposed amendments to the Medical Act presented their report, which was adopted with a few not material alterations. It has been impossible for us to obtain at once the official minutes, but these will be published in November. The following points, however, include the leading features of the changes which it is proposed to make. The Central Examining Board, which has already been decided upon, will consist of twenty members equally divided between French and English, and between those attached to our medical schools and those of the general profession. The professional examinations (primary and final) will be held in the middle of April. The preliminary examination will be held once a year only, in July, with a supplemental in September for those who fail partially only. In this examination, the optional branches are done away with, and physics, elementary chemistry, and mental and moral philosophy have been added to the obligatory subjects. The subject of botany has been erased from the medical curriculum. The amendments are not expected to come into force until after the 1st January, 1888. Clauses are also introduced governing the granting of licenses to licentiates in Great Britain, provided a similar privilege is accorded to the members of the Provincial College of Quebec. Parisian graduates may also be accepted in this Province without examination. Provision is also made for reciprocity with the Province of Ontario and any other Province in the Dominion in which there may be a Central Examining Board. It is further proposed to rearrange the method of election so that each judicial district may send its own representative, the representation of the universities and cities remaining practically unchanged. The committee which has elaborated these changes was continued, and will proceed to have a draft prepared containing the various changes decided upon and presented at the approaching session of the Provincial Legislature.

THE CHAIR OF MIDWIFERY IN McGILL UNIVERSITY.

Dr. A. A. Browne has resigned the chair of Midwifery in McGill University, a position which he has occupied with great credit to himself and to the University during the past three years. Dr. Browne was led to tender his resignation from the ever-increasing demands of a large private practice on his time and energies. His successor is Dr. James C. Cameron, late Professor of Obstetrics in Bishop's College. Dr. Cameron, ever since he graduated in McGill, has paid special attention to obstetrics. He has had opportunities shared by but few in becoming practically acquainted with this all-important branch of the medical curriculum. Shortly after graduating he spent a considerable time in the Rotunda Hospital, Dublin, and quite recently he acted as assistant in Prof. Braun's obstetrical wards in the Allgemeine Krankenhaus, in Vienna. This, the great midwifery school of the world at the present day, offers advantages that are not elsewhere obtainable. Dr. Cameron is well known as a clear, forcible and enthusiastic teacher. He has a field before him of unlimited usefulness, and it is our earnest wish that he may long live to cultivate it.

BRITISH ASSOCIATION MEETING.

It is very gratifying to Canadians to know that the recent Birmingham meeting of the above Association was one of the most successful that this important body has ever held. The ability with which the distinguished president, Sir Wm. Dawson, conducted the proceedings was the subject of general remark. The subjects discussed in the biological and physiological sections were of very little direct medical interest. A discussion which took place on cerebral localization was very disappointing both in matter and manner. The veteran experimentalist, Dr. Blake of California, read a paper on the connection between molecular and biological action. In the section for anthropology, Dr. Hingston of Montreal read a paper on "The Influence of the Canadian Climate on Europeans," and Dr. Felkin of Edinburgh one on "Acclimatization of Europeans in Tropical Africa." Dr. Ruttan, lecturer on Chemistry, McGill University, read a paper on "The Derivatives of Tolidin and the Azotolidine Dyes."

AXIS-TRACTION.—We notice an article by Professor William Stephenson of Aberdeen in the *British Medical Journal* of August 28th, 1886, "On the principle of Traction-rods, with a simple suggestion applicable to any Forceps." The correctness in principle and practical bearing of Professor Stephenson's views on the subject of axis-traction render this article well worthy of perusal. We would, however, call the author's attention to the fact that this identical "traction-hook" was devised and exhibited by Dr. Alloway at the Montreal Medico-Chirurgical Society meeting of November 9th, 1883,* and that the remarks made at that meeting upon the merits of the "traction-hook" were practically similar to those expressed by Prof. Stephenson in the article above referred to.

THE OBSTETRICAL SECTION OF THE BRITISH MEDICAL ASSOCIATION.

[The following account of some of the work in this section of the British Medical Association by a Canadian who was present will be read with interest.—ED.]

The annual meeting of the British Medical Association, held this year at Brighton, was one of peculiar interest; for, in addition to a representative gathering of the British medical profession, a number of foreign and colonial visitors were present, who took an active part in the discussions. In no section was better work done than in the obstetrical; the meetings were crowded, the discussions well sustained, and the results highly satisfactory. Three principal topics were chosen for consideration: 1, The alternatives to craniotomy. 2, The treatment of extra-uterine gestation by abdominal section and by electricity. 3, The removal of the uterine appendages.

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* "Canada Medical and Surgical Journal," December, 1883.

DR. ALFRED MEADOWS, president of the section, opened the proceedings with an able and thoughtful address. He favored the movement now going on in England, Germany and America to separate gynæcology from obstetrics, since now "each is sufficiently important to be regarded as a separate item, and is best studied and advanced by judicious and judicial separation." After paying a glowing tribute to the brilliant achievements of gynæcology in recent years, he entered a strong protest against the frequent resort to craniotomy, and expressed the hope that ere long the operation would be largely, if not wholly, abandoned, and that it would in most cases be regarded by the profession "almost as great a crime to thrust the perforator into the head of an unborn as of a born infant." He contended that "we have not exhausted the resources of civilization until we have found out some means by which we may in every case of labor, with reasonable chances of maternal safety, extract a living and viable child from the mother who gives it life." He hoped that the powerful influence of the British Medical Association would be used to check the fearful tide of infant slaughter which in Great Britain alone "sweeps away annually nearly two thousand innocent lives, besides hundreds of mothers." He criticised the term *uterine appendages*, as applied to the ovaries and Fallopian tubes, contending that the uterus is really the appendage, being inferior to the ovaries and tubes in physiological work. He acknowledged the sound and scientific basis upon which Tait's operation is founded, and endorsed its use (1) in tubal and ovarian disease beyond the reach of other measures, (2) in certain nervous diseases otherwise incurable, and (3) in relieving suffering from certain forms of uterine fibromata. In conclusion, he warned his hearers to remember that they are physicians as well as surgeons, and urged the necessity of attaining greater perfection in diagnosis and devoting more attention to uterine therapeutics.

Dr. Robert Barnes introduced the subject of "The Alternatives to Craniotomy" in an admirable paper, somewhat conservative in tone. He said that in Tyler Smith's time the perforator was more frequently used than the forceps, craniotomy being done once in every 340 cases. The abolition of craniotomy was Tyler Smith's dream ; but though this will probably never be realized, the frequency of the operation may in several ways be diminished : (1) By hygienic and prophylactic measures. Infancy is the time when deformity begins, hence infancy is the proper time to prevent it. Secure better food and hygiene for the working classes and deformity will decrease. Deformed pelves are much rarer in England since the passage of the Factory Acts, and of late years cases of extreme deformity are far less frequent than in Germany. (2) By the use of the long forceps with the pelvic curve, many children are now extracted through narrow pelves that would in earlier times have been sacrificed. (3) By the induction of premature labor, either before or after viability, when the case is seen sufficiently early. (4) By turning, an operation available from the 36th to the 40th week. But when the woman has come to full term with a living child too large to be extracted alive through her pelvis, the only alternatives are craniotomy or one of the Cæsarean section operations. Which shall it be ? For Cæsarean section two strong arguments are urged : 1st, The child has thereby a reasonable prospect of living. 2nd, The mother's chances are not much worse than after a difficult craniotomy. The advocates of craniotomy maintain that (1) Cæsarean section does not, as yet, give the mother as good a chance as craniotomy ; (2) the mother has a primary right to life, consequently that operation should be chosen which will give her the best chance. The whole question hinges upon the degree of deformity of the pelvis ; the operation, which is preferable in minor degrees of contraction, is not necessarily preferable in the major degrees. In deformed pelves with a conjugate of 3 to $3\frac{1}{2}$ inches, the risks of craniotomy should be scarcely more than those of natural labor ; in such cases craniotomy is preferable, especially as in subsequent pregnancies premature labor may be safely induced and family secured. In this way craniotomy may save more infantile as well as maternal life than Porro's operation, in cases where the deformity is not too great. But when the contraction is great, Cæsarean section is a fair alternative to craniotomy, and in skilful hands is to be preferred. Conclusions : 1, Greater attention to diet and hygiene, especially among the working-classes, will decrease the frequency of deformed pelves. 2, In very slight degrees of deformity, the long forceps, turning, and induction of premature labor are the proper alternatives to craniotomy. 3, Porro's operation is suitable in great degrees of deformity. 4, Cæsarean section (Sänger's or Leopold's) is legitimate in less degrees of deformity. 5, Craniotomy is preferable in minor degrees of contraction. 6, In other obstructions, such as tumors, Porro's operation or removal of the tumor. The legitimate aspiration of the obstetrician is to eliminate from his art the practice of craniotomy upon living children ; but the dream of Tyler Smith will probably be realized only when hygiene has triumphed over disease, and when all men and women are healthy and virtuous.

Dr. Kinkead of Galway followed with a paper on the possibility of reducing the maternal mortality of Cæsarean section to that of craniotomy. He said that the causes of death after Cæsarean section are shock, hæmorrhage, peritonitis, incarceration of intestine, exhaustion, and septicæmia, all of them dangers which are increased by delay in operating. In fact, delay and fruitless attempts to deliver in other ways are the main causes of the mortality. Dr. R. P. Harris has shown the mortality of Cæsarean section to be about 25 per cent. in pelvic deformity of 2½ inches, where the operation was done within the first 24 hours, no other operative measures having been previously attempted. Although this percentage is too high, it compares favorably with the 37½ per cent. of craniotomy in similar cases. Dr. Kinkead then described minutely the method of performing Cæsarean section according to Leopold and Sänger.

He strongly recommended the continuous suture for the uterine wound in preference to the interrupted, claiming that it controls hæmorrhage better, keeps the edges of the wound in closer apposition, secures earlier peritoneal union, and is less liable to tear out.

Dr. Lusk of New York said that in New York there are few cases of contraction under 3 inches, consequently forceps, turning, or induction of premature labor is generally sufficient. It is in the rarer cases of less than 3 inches that the question of craniotomy or Cæsarean section comes up. There are grave, moral objections to craniotomy, and any operation will be welcome which will relieve us from such a repulsive and degrading task. Dr. Harris has shown that 75 to 76 per cent. of Cæsarean sections recover when performed early and under favorable conditions, and that even in the fatal cases, careful examination of the particulars shows that death was generally due to causes necessarily fatal. For instance, the operation has frequently been done upon moribund women as a *dernier ressort*, everything else having been tried in vain; in one case, the patient was operated on with a razor, and in another the woman was actually a corpse before section was performed, yet these cases swell the mortality records. In the early Cæsarean operations, gaping of the uterine wound was the one great danger. Porro overcame the difficulty by removing the uterus. More recently Sänger and Leopold have overcome the difficulty by carefully stitching up the uterine wound and returning the uterus to the abdominal cavity. Their success is wonderful: Sänger operated upon four cases, with no deaths; Leopold ten cases, with one death. In three hospitals in Germany 19 cases have been operated upon, with the loss of only one mother and no children. The statistics of Sänger's operation in Europe and America to the present date are 28 cases, with 7 deaths.* The fatal cases have been either hopeless or done under unfavorable circumstances. There are three operations now before the profession—

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* Dr. R. P. Harris of Philadelphia has just published in the *Medical News* some additional cases of Sänger's operation, so that the record now stands—38 cases (in all countries), with the loss of 13 mothers and 4 children. The percentage of women saved is 78 (in Germany), and $68\frac{8}{19}$ (in all countries).

Sänger's and Porro's Cæsarean section, and Thomas' laparo-elytrotomy. They are not rival operations, but fulfil different indications, each having its own special limitations: 1, Sänger's operation is proper in the bulk of cases of 2¾ inches and under, where the cervix is moderately dilated, and the operation can be done early. 2, Porro's is preferable in similar cases where the labor has been protracted. The uterus is exhausted, tissue changes have probably begun, it is better away. 3, Thomas', when the head is at the brim, the vagina pulled up, and the cervix retracted over the head; the success is 6 out of 12 cases.

MR. LAWSON TAIT preferred Porro, because it protected the patient from subsequent pregnancy and its attendant risks. We are too apt to regard women merely as child-bearing machines, and treat them accordingly. To the discredit of our civilization, half the babies die before they reach five years of age. Why, then, argue against Porro's operation because it prevents subsequent child-bearing?

DR. T. M. MADDEN of Dublin looked at the question from the purely moral standpoint, and denied the right of any man to take human life. Fortunately, the opinion and practice of the profession are different from what they were in Sir J. Simpson's time, when the rule was "cold steel for the child, and mercury for the mother (for peritonitis)."

DR. EDIS thought that the preventive aspect of the question had not been sufficiently brought out, and advocated an early examination of patients to discover possible deformity. Premature labor could then be induced, and the dangers of subsequent serious operation avoided.

DR. EMMET read a clear and forcible paper on "Certain moot points in Gynæcology," the gist of which was that discharges from the uterus and vagina are generally due to some cause *outside* of the uterus, that pelvic inflammation is generally the cause resulting in dysmenorrhœa, displacement, etc. The treatment of these conditions resolves itself, therefore, into the treatment of the causative pelvic inflammation. Dysmenorrhœa and flexion often coexist, but they are both symptoms due to the same cause. Mechanical dysmenorrhœa is a myth, and stenosis has little effect upon menstruation—the most extreme stenoses have been observed with absolutely no accompanying symptoms. Prolapse, not version, is the cause of symptoms. A pessary gives relief by taking up the slack in the broad ligaments, supporting the blood-vessels and relieving congestion, not by merely holding the uterus up in its place. A pessary similarly relieves the troublesome symptom of irritable bladder, which is incorrectly attributed to pressure, but is really due to traction by the cervix on the utero-vesical folds. While not opposed to the use of pessaries, he believes they are used too frequently and too soon. They have a limited field and a definite time for employment. He is becoming more and more convinced that lacerated cervix is the fruitful cause of epithelioma. In the way of treatment for dysmenorrhœa, he recommends hot-water douches given at short intervals from the first pain till relief is obtained. He has abandoned intra-uterine medication, and believes that since doing so his patients require about seven weeks less treatment. The uterus is a very ready absorber, but its proximity to the peritoneum makes this dangerous; pelvic inflammation is very apt to be excited by intra-uterine applications. He owns neither a sound nor a uterine probe. In displacements, he first corrects the prolapse by cotton wool pledgets with glycerine, and waits for the absorption of old products of inflammation before introducing a pessary.

Dr. Bantock agreed with Dr. Emmet that 6, 9, 12 months rest in bed, with hot douching, etc., would cure many cases; but, unfortunately, there are many patients who cannot, or will not, submit to such a long treatment, and for such, intra-uterine treatment must be resorted to. For dysmenorrhœa, he believes in forcible dilatation of the cervix; we stretch the sciatic and other nerves for the relief of neuralgia, and similarly we stretch the cervix. He believes in pessaries, and uses them early, so that he may, as soon as possible, correct the passive congestion and restore a normal circulation. Chronic inflammation is a misnomer. Inflammation is always acute, lasts but a few days, and leaves behind it effects which should be called chronic passive congestion. In such cases, if the uterus is lifted into place, the congestion is at once relieved, and pain, tenderness, etc., soon disappear. In the operation for lacerated cervix, he does not agree with Emmet as to the advisability of waiting for months before operating; he thinks it best to operate early, thereby effectually unloading the blood-vessels and relieving passive congestion.

On the following day, DR. LUSK read his paper on "The proper moment for the performance of Gastrotomy in Abdominal Pregnancy." As a sort of text for his paper, he read a case showing the disastrous consequences of delay. He said that septic poisoning is the great danger, especially as in these cases its invasion is so insidious that it is apt to be overlooked. The early symptoms (chills, fever, etc.) are apt to be attributed in America to that ubiquitous disease *malaria*, though really marking the commencement of sepsis. The operation should be done as soon as the death of the child is certain. Do it early, before septic poisoning begins; don't wait for those symptoms which always mean danger.

MR. JESSOP of Leeds asked why the child should be left to die and become putrid. Why not operate sooner and save the child? He had operated once in this way, and saved both mother and child.

DR. EDIS said that if the operation is performed when the fœtus is alive, the risk to the mother is much increased. When the fœtus is dead, there is less congestion of the pelvic viscera, nature is rearranging her internal economy, there is a less highly organized sac, and consequently less danger. Martini's and Jessop's cases are the only two on record where a living fœtus was successfully removed without injury to the mother.

DR. AVELING'S paper introduced the subject of "Electricity as a means of arresting Extra-uterine Gestation." The galvanic current seemed to be preferred by most of the English speakers, the faradic by the Americans.

DR. GARDNER of Montreal related a case treated successfully with the faradic current, which he strongly advocated as being quite as effectual, and at the same time milder and pleasanter.

DR. EDIS emphatically condemned the expectant treatment, and urged the use of electricity early, before the termination of the third month ; after that period there would be more risk of sepsis after the operation.

DR. LUSK advocated the popularizing of the treatment by electricity. It is such a simple operation that it can be done easily and safely by the most inexperienced, while the later operations are far more serious, require greater skill, and can be performed successfully only by men of large experience.

MR. LAWSON TAIT entered his protest against the use of galvanism, and boldly denied the possibility of diagnosing extra-uterine gestation before rupture of the sac. His challenge caused quite a sensation in the section, and in the discussion which followed he got decidedly the worst of it.

On the following day, DR. SAVAGE read a paper on the " Removal of the Uterine Appendages." The discussion was interesting, but very one-sided. Dr. T. M. Madden being the only dissentient voice. His objections were theoretical, fanciful, and weak, being based chiefly upon moral grounds. Lawson Tait was the hero of the hour, and it must have been exceedingly gratifying to him to receive such hearty and unanimous endorsation.

Medical Items.

—Sir Andrew Clark has retired from the office of senior physician to the London Hospital.

—Dr. Bandl of Vienna succeeds to the chair of obstetrics in Prague, vacated by Dr. Breisky.

—The Czar of Russia, it is stated, sent M. Pasteur 40,000 roubles for his institute. The subscriptions received now amount to $300,000.

—The veteran ophthalmologist, Prof. von Arlt of Vienna, has had his right thigh amputated for gangrene. The latest acoounts report his progress to be favorable.

—Dr. R. J. Edes, Professor of Clinical Medicine in the Harvard Medical School, has tendered his resignation. He intends to remove to Washington to practice his profession.

A Remedy for Coryza.—Muriate of cocaine two grains, roasted coffee and white sugar, of each one ounce. To be taken as snuff.—*Med. Press.*

—Dr. James G. Wakley, editor and proprietor of the *London Lancet*, died on the 30th August from cancer of the tongue. He will be long remembered for his generous gifts to the "Hospital Sunday Funds."

—It is reported that another of Pasteur's patients has just died at Leste, near Bordeaux, after undergoing ten inoculations. The victim is a little boy, aged 3½ years, who was bitten by a mad dog on June 14th last.

—The next annual meeting of the American Public Health Association will be held in Toronto, Oct. 4th to 8th. Arrangements have been made with the Canadian Pacific Railway by which a limited number of delegates to the Association will receive return tickets for the Pacific coast from Toronto, Montreal or Quebec, at the greatly reduced rate of $85, and $25 extra for drawing-room and sleeping cars.

—M. Sellar of Paris alleges that the inhalation of hydrofluoric acid in pulmonary tuberculosis is productive of great benefit. The patients are submitted to daily inhalations, which last about an hour each time, and are repeated from twenty to thirty times. Air is passed into a mixture composed of 150 grammes of water and 50 of hydrofluoric acid. The air thus impregnated is propelled into a room in which the patients under treatment remain the necessary length of time.

Cocaine Anæsthesia in Parturition.—At the meeting of the Association of German Physicians in Prague in April last, Fischel presented the record of five cases in which local applications of cocaine were used to diminish the pains of labor. He quoted the brilliants results obtained by Doléris, in whose observations the drug was applied to the vaginal mucosa and the external genitals in aqueous solution, or in the form of a salve, the strength in either case being four per cent. The amount used was from 40 to 60 drops of the solution and 45 to 60 grains of the salve. In this manner Doléris induced practically painless delivery in 13 out of 15 primiparæ. Fischel's results were less striking. Employing, as a rule, weaker cocaine solutions, he records one case of absolutely painless delivery, two in which the pain was greatly diminished by the application, and two in which the results were negative. These observations, apart from the practical interest, tend to show that the seat of the labor "pains" is not in the uterus, but in the dilating cervix and the vagina.—*Wiener Med. Presse; Med. News.*

FEES OF NOTED PHYSICIANS.—The *Boston Traveller* thus quotes from a London letter :—

"'Do London doctors earn more than queen's counsel?' As a rule they do not, but the incomes of the three leading physicians and those of the three leading lawyers are about equal—that is to say, at the rate of $60,000 a year each. The largest sum ever earned in one year by a doctor was $100,000, made by Sir Astley Cooper. The three men at the head of the medical profession in England at the present day are Sir Wm. Jenner, the court physician, Sir William Gull, and Sir Andrew Clark. Just lately the last named has obtained considerable notoriety. He was induced to visit a very wealthy lady at Nice, and he received the unprecedented fee of $25,000. One-fifth of this amount he retained as a remuneration for his services, and the remainder he divided between two charitable institutions connected with his profession.

"Speaking of fees, there is a tale told of a rich colonial gentleman living in Kent who had the misfortune to take a slight cold. Not satisfied with his local medical attendant, he desired to have Gull down from London in consultation. Gull happened to be away, and Sir William Jenner came instead. He was duly paid his fee of $375 for the visit. The patient, feeling no better, then sent to Edinburgh to a leading doctor of that city, who travelled the 400 miles in order to see him, and in ordinary course received a guinea for every mile, that was 400 guineas, or $2,100. Again the patient felt no better, and this time Gull was summoned and attended.

"'I suppose,' suggested the local practitioner, 'you will pay Gull what you paid Jenner—375?'

"'Nonsense,' indignantly retorted the sick gentleman; 'I am not going to pay Gull less than I gave the Scotchman,' and he drew a check for $2,100. Before he got rid of his cold he had paid $7,000 in fees."

CANADA
MEDICAL & SURGICAL JOURNAL

NOVEMBER, 1886.

Original Communications.

INTRODUCTORY LECTURE

DELIVERED AT THE OPENING OF THE FIFTY-FOURTH SESSION OF THE MEDICAL FACULTY OF McGILL UNIVERSITY,
OCTOBER 1, 1886.

By FRANCIS J. SHEPHERD, M.D., Professor of Anatomy.

Gentlemen—It has fallen to my lot to welcome you to these halls in the name of the Faculty, and I do so with the greatest pleasure. Students, new and old, we are glad to see you here, and trust that none of you will ever regret having selected this school as the one in which to prosecute the study of that profession which will hereafter be your life's work. We know that you have come to us, not that after having spent a certain period of time here you may be able to write M.D. after your names, for if that were the reason, other institutions might be selected where the degree could be obtained more easily and in a much shorter time, but that you may obtain the best medical education that the country affords. Any student among you who has entered upon the study of medicine expecting to have a good time and pass four years in comparative idleness is vastly mistaken. We are all workers here, and want no drones ; if there are any such, we beg of them to go home and start life anew in some other sphere more adapted to their tastes and aptitudes, for here the environment will not suit them. To all who come determined to work and learn, we extend a most hearty welcome. Your four years will not be easy ones, but when they have ended and you have received your reward, you will feel yourselves amply repaid for all your hard work and close application, and will find that having commenced life well, the obstacles which arise in the future will be the more easily overcome. One great mistake made by students is to work solely for examinations; of course, this aim should not be altogether neglected, but it should not be the only one, for examinations are not the end of all things, and the man who, during his apprenticeship, endeavors to get the best knowledge of his subject irrespective of the examination bugbear will be the one who will succeed best in after life. Remember, there is something beyond the examination, viz., the practice of your profession; examination is only a crude method of testing a man's knowledge, and by no means always a certain one. When I was demonstrator of anatomy, and knew all my students personally, I could have easily picked out those who were fitted to become final men from those who were not, and I often found at the examination that it was not always the best men that came out at the head of the list. In many subjects, the man with the best memory takes the prize, not the one who afterwards proves most competent to successfully practice his profession or conduct scientific investigations.

There are two kinds of students: book students and practical students. With the former, lectures and books are most popular; and with the latter, work which trains the powers of observation and develops the investigating faculties. Now, neither class is to be altogether commended, but all of you should endeavor to make a judicious mixture (a chemical, not a mechanical mixture) of the two, and success will surely follow. If you depend solely on your memory, you will find that memory will be developed at the expense of the reasoning powers and the acquiring of scientific methods of thought. It is much better to understand your subject than to remember it, to know the why and the wherefore, and not say such a thing is so because you read it in a book or heard it in a lecture.

Speaking about lectures, I might here remark that lectures should not be too much depended upon for the acquisition of knowledge; they are only aids to knowledge, finger-posts to show us the way. As Mr. Guthrie remarked many years ago, " No man can be taught any practical branch of learning by lectures ; they can only point out to him what he ought to learn, and by giving him a general knowledge of the subject, enable him afterwards to work it out practically." Three hundred years ago Malgaigne said, " 'Tis the custom of pedagogues to be eternally thundering in their pupils' ears, as if they were pouring into a funnel, whilst the business of the student is only to repeat what the teacher has said." I have frequently seen students who could describe parts accurately in a written examination, unable to recognize the same parts when placed before them in an actual dissection ; they could also glibly go over the points of diagnosis between a hernia, hydrocele and a varicocele, and yet, when confronted with these diseases in hospital, be unable to recognize any one of them. These men had developed their memory at the expense of their powers of observation, trusted too much to book knowledge, and too little to practical work.

In this college, it seems to me that note-taking has always played too great a part, and that much energy has been wasted on it which might have been otherwise benefically and usefully employed ; the cause of this, no doubt, has been the examination bugbear and the idea that the professor only examines on the subjects treated of in his lectures, and that he prefers students who answer questions in his own peculiar way. Now, in my opinion, there are no lectures so valuable that it is necessary for students to make a verbatim report of them. What he ought to do is this : the evening before, he should, in a good text-book, make himself fairly well acquainted with the subject of the next day's lecture, and then, if the professor throws any new light, gives more information about it, or puts the subject in a simpler way, to note these points down, he should also endeavor to put down the most important points treated in the lecture. I remember when a student spending much valuable time and giving much labor for the sake of baving full and legible reports of all lectures. I have seen the error of my ways, and think that the only good this labor did me was to qualify me at some future time for a newspaper reporter or a lawyer's clerk. If the taking of accurate and full notes of all lectures delivered be such an important thing to the medical student, then why not include shorthand writing in the subjects necessary to be passed at the preliminary examination. Now that I am giving advice, it might be as well to say a few words to the men who, this year for the first time, are entering upon the study of medicine. The old students, I dare say, are not so anxious for advice and having already had their opinions crystallized on many subjects, it would be a difficult thing to alter them. Well, I need not tell you that you have a severe course of study before you and the sooner you set to work to overcome the difficulties the better, you should not take it easy the first year because the examinations are not so severe as in the primary or second year, but make up your minds to work as hard during the first session as in the subsequent ones, and if you thus make a good beginning you will find the work each year becoming easier and the interest in it increasing. Habits of work thus early acquired are likely to be lasting. If, at the end of the first year, you find you have no love for your work, it would be far better not to go on with it, for your future success is very problematical. In the first year, you ought to get a good grounding on all the primary subjects ; you should pay great attention to your practical anatomy, histology and other subjects, which are taught by demonstrations. I should not advise you to attend the hospital at all during your first session. Your attendance there with your present want of technical and other special knowledge will be of but little service to you, and will take away much valuable time from the study of those purely scientific subjects, which will form the foundation of all your future knowledge of medicine, and for the acquirement of which the time at your disposal is far too short.

In all your studies you should strive after exactness. Whatever you learn, learn well, and do not be satisfied with a general or superficial knowledge. In subjects such as anatomy, histology, physiology, etc., do not depend too much upon your books ; verify their statements by your own work. Your motto should be, "Prove all things : hold fast that which is good." When I tell you to strive after exactness I do not wish you to sacrifice other sources of knowledge for it. I have heard it said that many able diagnosticians are poor therapeutists simply because of their too great exactness, for remedies occasionally do good whose exact method of action we do not know. I have said a good deal about work, but I do not wish it to be thought that I disapprove of play. Recreation is necessary to most people, and taken in proper amount, like some remedies, is of great service. As a rule, few students need to be advised to take relaxation ; many, however, need much stimulus and pushing on to get them to work. Take recreation in moderation, but do not let such occasions, for instance, as the Winter Carnival interfere with your work ; do not neglect your physical culture, and remember the old saying, " Mens sana in corpore sano." Join the University gymnasium, and do not neglect daily exercise in the open air. The importance of good food and fresh air cannot be too much insisted on. The necessary eight hours sleep should not be curtailed. Stimulants may be left out of the dietary as totally unnecessary. There is one kind of recreation which will prove of the greatest service to you in future when engaged in your profession, and one which is not sufficiently appreciated by students. I refer to the Students' Medical Society. Here you will have an opportunity of discussing various medical subjects and of reporting cases which you have seen. You will get into the habit of expressing yourselves more or less fluently, and of having your ideas and opinions exposed to the purifying fire of criticism. There is no one who cannot add to the entertainment of the meeting by stating some fact, reporting some case, and, if a first year student, describing some anatomical abnormality, etc. Students, by means of this Society, get to know one another and are stimulated to take a greater interest in the work of their future profession. I consider it one of the best accessory means we have of educating students. I advise you all to join the McGill Medical Society, to attend the meetings regularly, and let each one of you endeavor to make it a great success.

I little thought when, as a fourth year student fourteen years ago, I sat on these benches and listened to the first introductory lecture delivered in this, then new, college that I myself would, at some future time, have to perform a similar duty. Yet so it has happened. Prof. Wm. Wright, in the course of an eloquent lecture delivered on the occasion to which I refer, spoke of the changes which had taken place in the school since its foundation as the Medical Institute in 1824; he then congratulated the students and professors on the magnificence of the building they were to occupy, and also described what constituted a well-equipped medical school.

It might be interesting to compare the present condition of the Medical Faculty with that of 1872, when it, for the first time, possessed a new and spacious building for teaching purposes on the University grounds. I have in my hand the calendar for 1872. Compare it with that of 1886. The great improvement in appearance and increase in size is a very good index of the present state of this school, which has, like nearly everything else, been evolved from something lower in the scale. In 1872 there were 11 professors, 1 demonstrator of anatomy, and an extra academical lecturer on hygiene. In 1886 we have 4 emeritus professors, 14 ordinary professors, 3 demonstrators of anatomy, 1 demonstrator of pathology, 1 instructor in laryngology, 1 instructor in diseases of children, 1 assistant to the professor of chemistry, 1 clinical instructor to the Maternity Hospital, and 1 assistant to the professor of clinical surgery,—in all, 22 men actively engaged in teaching, against 13 in 1872. Subjects are taught in a manner unheard of in 1872. Take, for instance, the chair of the institutes of medicine, as it was then called. In regard to instruction in microscopic work, in 1872, we thought ourselves fortunate if we once in the year, after waiting our turn for no inconsiderable period, saw the circulation of the blood in the frog's foot. Now there is a special course on histology and the use of the microscope, which every student is compelled to take. In 1872 there was no pathologist to conduct post-mortems at the hospital, and all that a student afterwards knew of practical pathology he picked up from post-mortems hastily made by house surgeons. He could graduate without ever having seen a post-mortem. It is true that our present Dean, Dr. Howard, at that time, in his lectures on the practice of medicine, took every opportunity to illustrate his lectures with fresh morbid specimens, but these specimens were necessarily shown at the end of the lecture hour to a crowd of students who jostled one another, and of whom only the most *pushing* could see and hear much; the modest, retiring, and, perchance, hard-working and thoughtful student went to the wall. Now, every student has himself to perform post-mortems under the direction of the demonstrator, and no one can possibly go out of this college altogether ignorant of practical pathology. In addition to this, there is a special course of lectures on the subject and a demonstration of specimens every week. In 1872 the lectures on pathology were crowded into the last two or three days of the session, and were included in institutes of medicines. It was fully understood that no questions would be asked on this subject at the examinations.

In 1872, gynæcology was not taught as a separate subject, and students had but few opportunities of seeing at the hospital any special work, though at that time everybody dabb'led in gynæcology. Now this is changed, and all have instruction in that most important branch of modern medicine. In this school we do not endeavor to make you all gynæcologists, but we wish you all to know something about gynæcology—a subject which is so often used by charlatans to work on the pockets and credulity of the female public, who are now conscious to an enormous extent that they possess internal genital organs, the different positions and conditions of which, according to our most eminent authorities, vary as greatly as the figures in the kaleidoscope, though all have a family resemblance. In other subjects, although the change and improvement in the teaching has not been so phenomenal, yet progress has been continuous. The lectures on practice of medicine were as able, eloquent and instructive then as now. The same may be said of surgery, midwifery, materia medica, and anatomy. The method of teaching these latter subjects, however, has much improved, and the student has the advantage of becoming more practically acquainted with his subject,—the teaching is now less mediate and more immediate, to use Mr. Herbert Spencer's words. In practical anatomy, much improvement has taken place. In 1872 we only had one demonstrator ; now we have three. At that time a student put in his time in the dissecting room more to get his ticket certified than to learn anything, and he had no fear of a future examination testing his practical knowledge of the subject. The dissecting-room was used more as a room for gossip and smoking than work ; demonstrations were few and far between, and the anatomy of the internal organs was completely neglected. It was only those who thirsted for knowledge and had the spirit of investigators in them who managed to learn anything. Now, the dissecting-room is a real work-room, where students are taught anatomy by frequent demonstrations, and where diligent dissecting goes on from 8 in the morning till 10 at night. No man can now pass through this college without a practical knowledge of anatomy, and before coming up for examination he must furnish satisfactory evidence of two years actual work done in the dissecting-room.

The improvement in the clinical courses at the hospital is quite as marked as the improvement in anatomy. In 1872, the principal clinical teaching was by didactic lectures in the operating theatre, with the patients in the wards. There was but little systematic bedside teaching such as now exists, and the clinical examinations at end of session were far from stringent, being more on the lectures delivered in the theatre during the winter than on the cases in hospital. Now all this is changed, and by a process of evolution has reached a high state of development. The daily clinical teaching is most systematic, and it is one of the boasts of McGill medical school and the Montreal General Hospital that nowhere on this continent is so much attention paid to clinical teaching, and in no other hospital have students such great clinical advantages. I speak from a personal knowledge of the various hospitals of the United States and Canada.

The curriculum has been much extended since 1872 ; at that time it was possible for a student to graduate after three sessions spent at college and one with a doctor, which latter really amounted to nothing but paying a fee of $50 or $100 to the doctor for a certificate of a year's study. Now, four full six-months sessions are required and one three-months summer session. I hope the time is not far distant when a second summer session (after the first winter) will be compulsory, and when histology, botany, and practical chemistry will be taught in that session. In this way we will be able to do all the practical anatomy in the day-time, and so avoid dissecting by gaslight and the taking away from students the early evening hours which should be devoted to study in preference to the later ones as at present. Night dissecting and night lectures are survivals of an old custom, when students followed other occupations in the day-time. In the early days of this school lectures were only given before nine in the morning and after six at night; and up to a few years ago, chemistry was still an evening lecture. Night dissecting is all that remains of this pernicious old custom.

The six-months session is another survival of old apprenticeship days. There is no reason why medical students should be idle for six months in the year; many forget in one six-months what they learn in another. The way to avoid this too equal division of work and play, is to have compulsory summer sessions in which the more practical parts of the profession are taught, and the student is not lectured at to excess. In this way his powers of observation can be cultivated and the knowledge acquired in the lecture-room tested by actual practice.

But to resume my comparison of 1886 with 1872. Students now enjoy many advantages in addition to the ones already enumerated, which were not even thought of 14 years ago. They are instructed in practical physiology and physiological chemistry. They can take part in the very interesting and important experiments continually being undertaken by the able and enthusiastic professor of physiology. At the University Dispensary they have an opportunity of seeing special clinics in diseases of children, nervous diseases, and diseases of the skin. At the hospital they can attend special courses on ophthalmology and otology ; also, they can receive special instruction on laryngology and its allied branches. In summer they can attend courses on clinical microscopy, general microscopy, operative surgery, operative midwifery, operative ophthalmology, electro-therapeutics, clinical chemistry and bacteriology, without a knowledge of which latter at the present day a medical man is regarded as nothing worth. All these advantages are open to the students of 1886, and every one is invited to partake of the great intellectual and scientific feast which is yearly spread in so generous a manner, and with the digestion of which a moderate infusion of bacilli and microbes will not interfere but act as a piquante sauce. As you are aware the faculty has not been content with merely improving the curriculum, but the building itself has been almost doubled in its capacity, and, as regards laboratories, work-rooms, etc., has been arranged to meet the requirements necessary for teaching modern scientific medicine. A new Maternity Hospital is in course of construction in a convenient locality, and I am happy to announce that the day is not far distant when the old General Hospital will be replaced by one of greater size and of the most modern type ; we do not yet consider our course a perfect one or that the building cannot be still further improved in the future. It will be the perpetual desire of the faculty to introduce, as occasion offers, still greater reforms which will keep us abreast with the rapid scientific progress which characterizes the present century. He who imagines that the present state of affairs cannot be improved upon, or is sighing for the good old times, will never assist in that great advance which has during the last quarter of a century so remarkably distinguished medical and surgical science. Such people forget, or are indifferent to the fact, that the world moves, and will soon find that they are out of the stream ; stranded before half the journey is completed and like the wrecks one sees occasionally on dangerous coasts, serving as a warning to those that afterwards navigate the same seas. As with individuals so it is with communities, corporations and colleges—our motto shall ever be " Excelsior."

I should like to say something about the tendency of the

Colleges of Physicians and Surgeons of the various Provinces to restrict the number of students entering upon the study of medicine. It was publicly stated by a late president of the Ontario College that something must be done to prevent the over-crowding of the profession, and it was suggested, among other things, that the entrance examination should be made more stringent. The College of Physicians and Surgeons of Quebec have actually elaborated a scheme, which they hope to have confirmed by the Legislature when it meets, which, when enforced, will certainly have the effect of restricting the number of English students who will, in the Province of Quebec, be desirous of entering upon the study of the medical profession. The feeling seems to be this with the profession at present, "Now we are in, let us protect ourselves against too great competition by increasing the difficulty of entrance into the profession, so that the struggle for existence may not be so severe." This is a very narrow view to take of any liberal profession. Of course they are all over-crowded, but not with good men and earnest workers, for, as the saying is, there is always "lots of room at the top." The Colleges seem to think with Majendie, that "the doctor is often superfluous, sometimes mischievous, and occasionally fatal." They, of course, mean the doctor of the future, not the present. The inclination seems to be to increase the number of studies which are supposed to add culture to a man, such as philosophy (so-called), logic, metaphysics, belles-lettres, astronomy, geology, and even theology, and not to include those subjects the study of which are to be of benefit to the student in the after acquirement of his profession. Now, it is my opinion that the preliminary examination need not be of a very exalted or elaborate character, that a man who has a good elementary knowledge of mathematics, Latin, English composition and spelling (of which but the smallest amount seems at present to be required), and one modern language and some elementary knowledge of the sciences, such as biology, physics and chemistry, is fitted to undertake the study of the medical profession. Where we should be most strict and severe is in the after-professional examination. No man should be allowed to graduate or be licensed to practice with the small amount of knowledge required by many of the Examining Boards. Is it not absurd that at the preliminary examinations in this province that some 50 to 60 per cent. of students (including B.A.'s from the best universities) are rejected annually, while dozens of men are admitted to the practice of the profession with the smallest modicum of knowledge of medicine and surgery? I am certainly an advocate of extending the scope and character of the preliminary examination in the direction of giving it a more scientific character, and think that physics, botany, biology and elementary chemistry should be subjects learned before entering on the study of medicine, but this extension requires time, and more facilities for teaching these subjects are needed in the ordinary schools of the country before they can be included in the compulsory subjects of the preliminary examinations.

I have another fault to find with the various boards—that is, the character of their professional examinations. The examiners are selected not on account of peculiar fitness or knowledge of the subject in which they examine, but because of some medico-political, territorial or other reason, and the feeling that the good things ought to be distributed irrespective of the fitness of the man for the position. I should advocate that no one who does not teach should be an examiner, for it is chiefly the teachers who are *au courant* with the progress of the more scientific subjects, and who know what students should be examined in and how the subject should be treated. I have heard of medical men in a neighboring province being selected to examine on such a subject as physiology, and who, a short time before the examination, cram up certain portions of a text-book used when they were students, and perhaps some 15 or 20 years behind the times, and then examine on these portions. I think this system an iniquitous one, and the sooner it is done away with the better. These appointments should only be given to the best men, and men who have some reputation in the subject on which they examine.

Before closing this fragmentary lecture, I wish to say something about the subject in which I am particularly interested, and which I have the honor to teach--viz., Anatomy. I know that the opinion is commonly held that professors desire to make the most of their own subjects, and to unduly magnify their importance ; still, I think every unprejudiced man who has thought out the matter will admit that anatomy is the foundation on which not only the superstructure of scientific surgery is built, but also scientific medicine. Dr. Wm. Hunter, in an introductory lecture delivered over 100 years ago in London, said, " When we hear any man of the profession talking of all the knowledge of anatomy that is necessary for a physician, and of as much as a surgeon needs to know, we cannot but lament the singularly hard fortune of his patients : first, in being sick or diseased, and then, in falling under the care of so ignorant a counsellor. Who is the man of practice and integrity that can lay his hand on his heart and say that he has not, in some case or other, had occasion for all his anatomical knowledge ; and who has not wished at times that he had been possessed of more ? Who, then, are the men in the profession that would persuade students that a little of anatomy is enough for a physician and a litle more too much for a surgeon ! God help them ! They have it not themselves, and are afraid that others should get it." (*Hunter's Introductory Lectures*, *Lond.*, 1784.)

Anatomy forms the basis on which all other sciences, as physiology, pathology, etc., are built, and without an accurate knowledge of it no man can hope to become a scientific practitioner of medicine. There is no royal road to learning anatomy, and no easy method. The student must rely principally on his own exertions, for by constant and thorough dissections only can any real knowledge of the subject be acquired. Books are useful in so far as they tell the student what he should see and look for, and lectures enable the student to get a general view of the whole subject and to appreciate its more scientific aspects ; but the kind of knowledge which remains with you longest, and is of the most benefit in the after practice of your profession, can only be obtained by assiduous dissection.

Gentlemen, you can never learn too much anatomy, and you will probably never have so good an opportunity as the present for acquiring a real knowledge of this vast subject; so work while you can. After you leave college you may be able to continue many of your studies practically, but your chances of studying anatomy will be few indeed. In practice, it is possible to get along without much knowledge of microscopy, practical chemistry, physiological chemistry, botany, pharmacology, and even bacteriology, but without a knowledge of anatomy and physiology, " the practice of medicine and surgery must degenerate into the mere empiricism of the quack." Anatomy is not the dry subject it is usually represented to be. Studied in the light of modern science, especially when taken in connection with development and animal morphology, it opens up many new fields of inquiry and puts us in the way of solving many of these problems which are exercising the greatest minds of the day. What an intense fascination there exists in seeking for the explanation of the existence of rudimentary organs and muscles " primæval heirlooms," as they have been called, is known only to those who make the study of anatomy a labor of love.

Again, there are many disputed points in anatomy and many old errors in the books which have been perpetuated for centuries, and which it would be well for some of you to look into. Every year shows us how human anatomy, which was once supposed to have reached its finality, is advancing: the true anatomy of the brain is yet in its infancy, and surface and applied anatomy are departments quite modern in their origin. The exact position and relation of many of the organs are being only now determined by means of frozen sections. But I must not say anything more of this great and fascinating subject, lest I should excite the envy of my colleagues by inducing you all to become anatomists.

In conclusion, gentlemen, I again exhort you to be earnest in everything you do, and avoid frivolous superficiality. To use the words of that greatest of all Books, " Whatever thy hand findeth to do, do it with thy might: for there is no work, nor device, nor knowledge, nor wisdom in the grave whither thou goest."

SCROFULOUS OR TUBERCULOUS GLANDS OF THE NECK.

By Geo. E. Fenwick, M.D.,
Surgeon to the Montreal General Hospital; Professor of Surgery, McGill University.

(*Read before the Canadian Medical Association, at Quebec, August, 1886.*)

The lymphatics of the neck are frequently affected by simple inflammation from cold. They sometimes become sympathetically enlarged from some local irritation; but what are known as scrofulous glands are so intimately connected with tubercle, if, indeed, they are not actually tuberculous, that they demand a separate consideration.

The term scrofulous has never appeared to hold any very definite signification. It certainly cannot, *per se*, be regarded as a positive state of diseased action known or indicated by a certain set of signs and symptoms, but is rather a state of the system generally, a peculiar constitutional condition or diathesis, acquired or inherited, which subjects the individual to the invasion of certain well-marked affections.

The term scrofulous, as applied to enlarged lymphatic glands, does not indicate the actual condition of change in the gland structure. It is true that enlarged and caseating glands are constantly met with in persons suffering from what is termed scrofula or struma, but this state of enlargement and alteration in texture has long been recognized as due to or depending on the presence of tubercle. To discuss the history of tubercle would be foreign to my purpose, and would occupy more time than I have at my disposal. First definitely described by Bayle in the early part of this century, various theories and opinions have from time to time appeared. The discovery by Koch in 1882 or '83 of what he named the "tubercle bacillus," and which he has demonstrated as existing in all tubercle, has completely revolutionized the views tacitly admitted by pathologists as to the actual nature of this change in the tissues. Koch believes the bacillus to be the *materies morbi* of tubercle, so that the views held by Virchow that it requires evidence of the presence of miliary tubercle in connection with cheesy products to constitute true tuberculosis must be greatly modified, and it is now held that all inflammatory changes, whether in a state of cheesy degeneration or not, if the bacillus of tubercle can be therein demonstrated, must be regarded as tuberculous. While I have confined my observations to tuberculous glands, I must state that there are many other structures which are liable to the invasion of the tubercle bacillus, and which are recognized as properly coming under the heading, not of scrofulous degeneration, but of tubercular infection.

In discussing the subject of the liability of the various tissues and organs of the body to the invasion of tubercle, Volkmann holds that the evidence of tuberculosis depends (1) on its well-known structural appearance, (2) on the presence of the tubercle bacillus, and (3) on the positive results given by experimental inoculation. There is scarcely any texture of the body which is exempt from the invasion of tubercle, and it would seem that the lymphatics are specially open to attack, since their very function, as it were, exposes them to infection. Clinical experience points to the liability of the tissues to this invasion of the bacillus. While this great fact is borne out by every-day observation, it is equally true that a peculiar aptitude or condition of the system must exist to favor the occurrence of the disease known as tuberculosis. We may believe that many, if not all, are occasionally exposed to the influence of the materies morbi of Koch, but it would appear that a suitable soil is essentially necessary in which the germ can develop and give rise to the various changes that have been noticed in its wake. To this state of special liability to the invasion of tubercle—to this peculiar diathetic condition the term scrofulous may be applied with some definite signification.

Of all the superficial glands, those of the neck exhibit a special aptitude to the invasion or development of tubercle. The glands of the axillary and inguinal regions are rarely affected. In the neck, the most favored localities are the submaxillary, the glands at the angle of the jaw, and those situated in the posterior triangle. Usually, when first seen, they are somewhat small, unless, indeed, they have for a time escaped notice, and have been left undisturbed, when they will occasionally attain a considerable size. They are described as having been met with, several inches in diameter, although I must say that very large glands have not, so far, come under my own observation. They are rarely single, more frequently the entire chain of glands are enlarged, some being exceedingly small, but very distinct, and sometimes the glands on both sides of the neck are implicated. They present firm, painless, non adherent growths, quite movable, and feel as if they were connected the one with the other, which in verity they are, by enlarged and thickened lymphatic vessels. Occasionally large masses are met with, made up of several small glands held together by dense areolar tissue, not, however, completely fused, as the capsule of each, although markedly thickened, is perfectly distinct. The centre of each gland, if examined, will be found to contain soft, cheesy matter, somewhat resembling the curd of milk. This I have seen in very slightly enlarged glands, so that it would appear to be an early condition of change, and is not evidenced by any inflammatory state, such as redness or excessive sensibility. If the enlargement is left to itself, or if irritated by some local application, suppuration will advance. The skin over the growth inflames, becomes red and tender, the abscess, for such it is, soon bursts, and a thin, curdy pus is discharged. The areolar tissue around the gland is involved, and the skin becomes adherent. The abscess cavity, after the discharge of its contents, may fill up and close. More often, however, an indolent sinus is left, with thin, purplish undermined edges, or the integument may ulcerate, giving rise to a troublesome and unhealthy sore, which heals with difficulty. This constitutes the well-known strumous ulcer. If the sinus or ulcer heals, it leaves a depressed cicatrix, which becomes adherent to the deeper tissues. Occasionally prominent papillæ remain bound down by cicatricial ridges or bands. Resolution, after a fashion, does, in exceptional cases, occur without suppuration and discharge of pus. The caseous matter becomes dry, the enveloping capsule becomes firm and dense, and an indolent, but somewhat unsightly, nodule remains, but which does not wholly disappear.

Another clinical feature of these so-called scrofulous glands is the tendency to extension to other unaffected glands in their immediate neighborhood. The disease will show itself, it may be, in a single gland, and will in due course extend, so that the entire chain of glands become implicated, thus showing a marked contrast with enlarged glands from other causes, these latter are generally single, and do not tend to implicate others. Constitutional remedies do not appear to possess any controlling power, but, like a smouldering fire, the action will go on regardless of all attempts to arrest it by either local applications or constitutional remedies. The disease, if left to itself, or if treated by internal and local means, will be found to follow the same course as above described. Abscesses will form and open, sinus or ulcers be left, which in due course, if they do heal, will leave the part seamed, scarred and disfigured. While this local injury is in progress, we cannot prevent the infection of other vital organs, as this bacillus is in length about one-third the diameter of a blood-corpuscle, and in thickness it is stated to be one-fifth of its own length. A micro-organism of such a size is capable of entering the blood-stream, or of getting into lymphatic vessels, and of being carried to any organ or gland of the body. It naturally follows that if tubercle is in verity a mere inflammatory change due to the presence of this microbe, the sooner the microbe is removed the better, and the safer for the patient's life.

Very little is known concerning the actual mode of entrance of the microbe. Various theories have been proposed on this point, and perhaps all are correct, as they possess the semblance of truth. There is, however, one other fact in this connection to which experience points, which is, that individuals are not subject in the same degree to the chances of infection. It has been supposed that the bacillus may enter by the stomach or lungs, or some abraded surface, cuticular or mucous, and yet do no harm. The power of protection appears to reside in healthy-living tissue. But if there is some defect in constitution, some special vulnerability, the microbe meets with suitable soil, and will there develop. It has been suggested that the peculiar soil in which the bacillus grows may with propriety be called scrofulous, and that the seed itself, the consequences of its growth and the manifestations which follow, would more properly come under the heading of tuberculous. Another point of great importance is that concerning the development and multiplication of the bacillus. Koch has pointed out that the larger the number of microbes introduced by inoculation the more rapid will be the diffusion of tubercle, until it becomes general. He has also described the mode of multiplication of the microbe by fission and the formation of spores. Such, then, being assumed as true, it naturally follows that to delay the removal of an infected gland is to expose the individual to the risk of general tubercular infection. But we have positive evidence on this point: it is within the experience of most of us that phthisis in many instances can be traced to or connected with scrofulous glands of the neck, or some other tuberculous affection either of the bones or joints or of other tissues in which the local malady preceded the general diffusion. And I think we can record other facts in this connection in which the removal of diseased or enlarged glands or of tuberculous joints has been followed by general improvement in health. Such general improvement will follow after the healing of sinuses or ulceration, which is the sequence to the discharge of pus from a tubercular abscess.

But what a contrast is the part which is left to nature with that which has been early dealt with by the surgeon's knife. In the one instance, the individual, after being subjected to the risk of general tuberculosis, will recover with the part seamed and scarred in every direction with adherent and puckered cicatrices, and this probably after years of suffering; in the other, the disease is at once removed, the patient is to a certain degree protected from infection by the entire removal of the diseased tissue, and this at the expense of a simple and not hazardous operation, a week or ten days surgical treatment, and ultimately a scar, which is not more than a narrow, thin white line, and which in some instances is scarcely perceptible. This radical method of treatment is, to my mind, preferable to that adopted by some surgeons, as laying open the part and scraping all diseased tissue away. In cases where sinuses and ulcers remain, I should think the use of the spoon would be attended with good results, but even in these cases where there remains a ragged opening with thin undermined edges, it appears to me that removal of the entire diseased mass, freeing the skin from deep attachments, and bringing the edges carefully together, is a better method of treatment than that by the spoon.

Mr. Treves recommends the use of the fine point of a thermo-cautery, which he thrusts into the gland and passes it in several directions in the gland tissue. This method I never have employed, and I must say that it appears to me an unsurgical proceeding. I should trust alone to complete removal by the knife, and I may say that so far, I have not met with any case in which the entire removal has not been applicable. After removal, the subsequent healing is rapid; very frequently two or, at most, three weeks has sufficed to produce perfect union, and the subsequent scar has been slight and in time scarcely perceptible.

CASE I.—On the 17th April, 1873, I was consulted by a gentleman, aged 27, with a large glandular tumor situated on the right side of the neck, extending as high up as the ear. It was nodular, firm, and appeared to consist of several glands held together by dense fascia; it was to the inner side of the sterno-mastoid muscle, and was quite movable. The tumor had been there for some two years, and had proceeded apparently from cold and exposure. For over twelve months he had been under treatment, various applications had been made, and the directions of his surgeon had been implicitly followed. He had taken iodide of potash, cod-liver oil, etc., without the slightest effect on the growth. When seen, the growth was the size of a goose egg. I recommended its removal, and the operation was performed on the 21st April, 1873. This man, although he had recently returned from England, was pale and looked out of health; he was weak, and unable to stand much fatigue. The wound united by first intention. It was before the days of strict antiseptic precautions. Silk sutures were employed, a drain was inserted, and the wound dressed with wet lint and oil silk. Four distinct glands were removed, and all were in a state of softening and contained pus. This I considered remarkable at the time, because there was no external evidence of such an event as suppuration having occurred. The following autumn he returned with an enlarged glandular growth lower down, and apparently beneath the sterno-mastoid muscle. This was removed on October 13th ; three small-sized glands were removed with ease without disruption of their capsule, and in each instance the gland was found in a condition of caseation. Recovery in this instance was rapid ; the wound closed in the course of ten days. I met this gentleman during the early part of the present month, August, 1866. He is robust and healthy in appearance, and the two scars in his neck are so indistinct that they would be readily passed over by a casual observer.

Case II—March, 1874.—This was a young woman, aged 27. She had a glandular growth situated near the angle of the jaw on the right side. Had been under treatment for several months. The iodide of lead ointment had been used, and other internal remedies. She was pale, thin, and with a phthisical family history, her mother, a sister and a brother having died of phthisis. She consulted me in regard to the tumor, which was most unsightly. I advised its removal, and the operation was done on the 23rd March following. A single straight incision was made and three distinct glandular masses, softened and breaking down, were removed. A portion of the skin over the growth, which had thickened and was adherent, had to be taken away. Recovery was rapid. Six months after the removal this patient had greatly improved in personal appearance, and a very slight whitish scar was visible, but it was soft and non-adherent to the deeper parts.

Case III.—M. R., aged 20, admitted into the Montreal General Hospital in April, 1883. This patient had been operated on before, and several glands removed from the upper part of the neck. There was a chain of glands, enlarged, extending down almost to the clavicle ; two at the upper part, a little below the angle of the jaw, had suppurated, and several sinuses led into a lot of gland tissue, which was disintegrating and discharging. This gave her great annoyance, and had a marked effect on her general health. She was pale, anæmic in appearance, had a very anxious, troubled look, and was very much depressed in spirits. I recommended their removal, and she willingly consented. The operation was performed on the 25th April. An incision to the outer side of the sterno-mastoid and reaching to the clavicle had to be made ; from this quite a number of glands were removed—in fact, all that in any way were enlarged. Several were open and discharging pus, these being situated at the upper part of the wound ; lower down they were small, but all had softened, and contained cheesy matter. With some considerable difficulty they were all removed, the edges of the skin pared and brought well together, and the wound dressed in the usual way after Lister's method. The spray was used throughout the operation and subsequent dressings. On reference to my note-book, I find that the wound had quite closed on the 15th May, but she did not leave the hospital for several days thereafter. I may state that this young woman is at present in robust health, and from being a weak anæmic girl, she is now making rich blood, and has greatly improved in appearance. The scar is white, but perfectly free, soft and pliable, and unattached to the deeper parts.

I have the notes of some eight cases in private, besides ten or twelve performed at the Montreal General Hospital, making over twenty cases that have come under my own observation. In all, the results have been quite satisfactory. The general health of all these patients has been greatly benefited by the removal of the glands. Several, from presenting an appearance of decided ill-health, ex-sanguine, anæmic, and in a state in which you would suppose a general break-up was threatened, have markedly changed for the better, and assimilation has greatly improved. Several of these patients have become quite healthy and robust, have increased in weight, and have in no way suffered from the removal of these important organs, which were in verity, before their removal, so damaged as to possess little, if any, functional activity. I cannot do better, in this connection, than endorse the conclusions of Mr. Pridgen Teale, in some very excellent clinical remarks made by that surgeon in reference to tuberculous glands: "That surgery can secure the healing, in a very few weeks, of sinuses and cavities leading to to diseased or tuberculous glands, even though they have existed for years, and that in cases of caseous and suppurating glands, the action of the surgeon should be vigorous and thorough."

REMARKS ON THE TREATMENT OF GONORRHŒAL OPHTHALMIA.

By F. Buller, M.D., Professor of Ophthalmology, McGill University.

(Read before the Canadian Medical Association, at Quebec, August, 1886.)

The developments of bacteriology have given a new impetus to the therapeutics of eye diseases, and especially to the search after remedies suitable for the cure of the more severe forms of inflammation of the conjunctiva. Of these, the acute purulent ophthalmia caused by contagion of gonorrhœal virus is undoubtedly the most dangerous and destructive. The severer cases of ophthalmia neonatorum might, perhaps, all be placed in the same category, and although we still, unfortunately, meet with many cases of loss of sight in one or both eyes from this affection, it is something to know that such a result is almost always due to neglect or improper treatment, for in the hands of competent ophthalmic surgeons a cure of this disease without loss of vision is, as near as may be, a matter of certainty. Not so, however, in gonorrhœal ophthalmia of older persons. Up to the present time, so far as I can ascertain, no plan of treatment ever yet suggested will prevent great impairment or total loss of vision in a large percentage of such cases.

A review of the literature on this subject during the past five years would show an extraordinary divergence in the views of skilled therapeutists in regard to the treatment of this disease. Some use hot applications from the outset; others, constant cold applications until the inflammatory process is well on the decline. Some begin, continue and end with caustics and astringents; others eschew them entirely. Some employ caustics and antiseptics; others, antiseptics without caustics or strong astringents. Only on one point all are agreed; that is, the necessity for frequent cleansing of the diseased eye. And most are agreed as to the expediency of protecting the fellow eye by some mechanical contrivance if only one be affected.

Latterly there is a growing tendency to employ such remedies as are known to have powerful antiseptic properties. A complete list of the remedies more or less in vogue on account of their supposed efficacy in this direction would be a very long one. I will mention only those I have seen most frequently recommended in current literature. They are quinine, chloral, boracic acid, oil of cade, resorcin, red oxide of mercury, peroxide of hydrogen, salicylic acid, salicylate of soda, iodol, binoxide of mercury, carbolic acid, iodoform, and perchloride of mercury. Of these, the last three take the highest rank, and in the order given. There are plenty of cases recorded where acute purulent conjunctivitis, treated chiefly by one or other of these agents, has terminated satisfactorily, and sometimes the cure has been astonishingly rapid, but as yet no one has dared to vaunt them as specifics ; this could only be done after a long series of the most virulent cases had been treated with uniform success. Such a series has, so far as I am aware, never been published, and if it had, I, for one, would remain sceptical until positive proofs of its truthfulness were furnished. Nevertheless, I have strong hopes we shall achieve such a result in time. As yet the treatment of conjunctival inflammations by so-called antiseptics must be regarded as a promising method still in its infancy. Assuming, for the sake of argument, that the various forms of conjunctivitis are charactertized by, and perhaps dependent on, the presence of certain forms of micrococci, no one will pretend to say that we know all about these organisms from a therapeutic standpoint. What, for instance, are their differences in vitality or in their power of resisting germicide agents ? Can we ever be sure of reaching them in such a structure as the conjunctiva so thoroughly as to destroy them without destroying the tissue in which they are working mischief. As long ago as 1881, A. Gräfe attempted to define the usefulness of antiseptics in diseases of the conjunctiva, and recommended their use (1) as a prophylactic, (2) in the beginning of contagious affections, and (3) where the disease tends to a croupous or diphtheritic character rather than a simple blenorrhœa.

In 1882 Lubrecht cleansed the eyes (in gonorrhœal and ophthalmic neonatorum) with dilute corrosive sublimate solution, and found it beneficial, though it did not check the disease.

In 1884, Reich recommends weak solutions of corrosive sublimate as a disinfectant in blenorrhœa and other contagious affections of the conjunctiva, but he used strong solutions (1 to 3 grains to the ounce) in the treatment of granular ophthalmia, washing off the lids before replacing them, as in using strong solutions of nitrate of silver. I would here remark that it is a common practice to use stronger solutions of nitrate of silver in purulent than in trachomatous ophthalmia. Why, then, should we not pursue the same practice in the use of corrosive sublimate in acute blenorrhœa. Certainly we cannot expect to get its full effects as a germicide in the weak solutions hitherto commonly employed, not because the weak solution is incapable of doing the work under favorable conditions, but because the conditions are necessarily altogether unfavorable.

Pernice, in 1884, experimented on the cornea of rabbits with pus taken from a lachrymal abscess, and found its inoculation in the cornea produced deep ulcers and suppuration of the cornea, but if the same pus had been mixed for a while with a weak (1–10,000) solution of corrosive sublimate, it thereby lost its infective qualities. He therefore advocated such a weak solution of corrosive sublimate in the treatment of conjunctivitis and corneal ulcers; practically, however, I think it will be found so weak a solution is of very little value as an antiseptic in ophthalmic practice.

I have recently had an opportunity to test the efficacy of perchloride of mercury in three cases of acute blenorrhœa, two of which were clearly of gonorrhœal origin, and the third probably of the same nature. The results were, it will be seen, not altogether unsatisfactory.

Case I.—A. D., aged 19, French-Canadian, admitted into hospital June 19th suffering from typical gonorrhœal ophthalmia in left eye of about one week's duration; self-inoculated; lids much swollen; copious purulent discharge, and chemosis of conjunctiva; cornea intact. Ordered ice compresses and the conjunctival sac to be washed out every hour with solution of boracic acid, and every fourth hour with a solution of perchloride of mercury 1–2000. This treatment continued for four days with little or no visible benefit. A small transparent ulcer of cornea now visible. Ordered one application of solution of hydrag. perchloride, and afterwards the above treatment continued. The following day there was a marked improvement in the condition of the eye. Four or five days later, commenced the use of nitrate of silver, 20 grains to the ounce, once daily, in addition to the other remedies, and the patient was discharged cured on July 10th. Total duration of the disease, 24 days.

Case II.—A little girl, aged 3 years, admitted into hospital July 28th with intense purulent ophthalmia of both eyes, of about two weeks duration in right eye and one week in left. This little patient had an acute vaginitis, and was therefore, in regard to the eye affection, probably self-inoculated. A similar course of treatment was pursued. There was some ulceration of right cornea on admission, but this never reached any serious dimension, and both eyes are now well of the disease without impairment of vision in either.

Case III.—E. L., aged 16, a small lad for his age, admitted into hospital for rheumatism, which was found to be of gonorrhœal origin. Left eye affected with intense purulent ophthalmia of doubtful duration. Cornea, when the treatment began, said to be slightly involved at outer and upper part. The same treatment was prescribed and continued until I saw the patient myself about a week later. There was then an extensive slough occupying the outer three-fourths of the cornea; only a small portion at inner side not involved. I immediately changed the treatment by cold compresses to frequent applications of very hot fomentations. The sublimate lotion and the boracic acid wash continued as before, only warm instead of cold, and a two-grain solution of eserine instilled every two hours. From this time the destruction of the cornea came to a stand-still, and in a few days the slough was thrown off, revealing a very extensive ulceration of the cornea, with a perforation and small prolapse of iris at the upper and outer part; a shallow anterior chamber with a small pupil dimly visible through the semi-transparent ulcerated surface. The ulcer is rapidly filling up, and a subsequent artificial pupil at the inner side of cornea will probably secure useful vision.*

In the first two cases the result was all that could be desired and certainly afford encouragement for a further trial of the same plan. The prompt effect of the solution of perchloride 1–1000 when 1–2000 did not seem to be working well, is a significant fact, and leads me to hope that the stronger solutions used cautiously may shorten the course of the disease. If there were any way to protect the cornea from the action of strong solutions and at the same time make a thorough application *to all the diseased surface*, I have little doubt the salutary effects of perchloride solution would be much more apparent.

It is obvious that repeated and thorough cleansing of the eye must always take first rank in any plan of treatment, and this is where failure most often comes in, the medical attendant satisfying himself with general directions, without taking the trouble to see that they are strictly carried out.

What percentage of persons suffering from gonorrhœal ophthalmia have the undivided attentions of two or even of one nurse? and yet the best authorities lay down this thorough attention as the chief essential to successful treatment. Though a firm believer in the utility of cold applications, I cannot leave the subject without calling attention to the urgent necessity of watching the condition of the cornea during their use. If at any time any considerable cloudiness of the cornea, or a considerable area of dense opacity with or without loss of substance, or even if considerable ulceration occurs without opacity, as is often seen in the form of a crescentic furrow close to the corneal margin, then the cold applications must immediately cease and be replaced by frequent fomentations with very warm water. In this way a cornea otherwise doomed to destruction can often be saved, in part at least, and, perchance, though but a wreck of its former self. Some vision may be retained and the patient spared the misfortune of a shrunken and sightless eyeball.

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* The prognosis given here has been justified by the result. The eye is somewhat blanched, but still quite useful as a visual organ.

QUARTERLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

PREPARED BY WM. GARDNER, M.D.,
Gynæcologist to Montreal General Hospital; Professor of Gynæcology, McGill University.

Alexander's Operation.—One of the latest contributions to the literature of this operation is a paper by Professor Polk of New York, in the *New York Med. Record* for July 3rd, 1886. Dr. Polk's paper is based on 15 cases he had performed at that date. He reports some observations very pertinent to the subject, by his colleague Prof. Williston Wright. The outer two inches of both ligaments removed in one of Prof. Polk's cases were handed to Prof. Wright that he might test their strength by attaching weights to them. This was done, and he reported that one of them broke only when the weight had reached five pounds; the other at four and three-quarters. It will be remembered that the portions tested were the weakest parts of the ligaments—the outer ends. By the time the break had occurred they had become stretched to about twice their usual length, but stretching did not begin until the weight had reached 2¾ lbs. in one case and 3 lbs. in the other. Dr. Polk remarks " if now we remember how much less than 3 lbs. any prolapsed or retroverted uterus will weigh, it is seen that any part of the ligaments is sufficiently strong to answer the objects of the operation." Dr. Polk had an opportunity of examining during an operation for removal of the uterine appendages, and observing the complete success of a previous shortening of the round ligaments in supporting a uterus dragged down and weighted by a myoma on its posterior wall.

The result of pregnancy in nowise undoing the effects of the operation is now a matter of experience. Neither is the function of the bladder in any way deranged. Dr. Polk appends brief histories of the 15 cases. He sums up the indications for the operation as follows: " Prolapse of the uterus; retroversions and retroflexions of the uterus, in which the organ can be placed in the normal position, and yet a pessary cannot be comfortably worn; prolapse of the ovary, the organ being reducible, and not large enough or diseased enough to demand removal." He prepares his patients by dieting and cathartics, as for ovariotomy. He operates as Dr. Alexander directs, and has not had any difficulty in finding the ligaments or drawing them out. He advises aseptic vaginal tampons to retain the uterus and take off the strain on the ligaments for the first 48 hours. Patient to be kept in bed one month ; to avoid straining for six months, and be very moderate in sexual intercourse. Contrary to some operators, he thinks the operation neither dangerous nor difficult, and a valuable addition to our resources for the relief of these conditions.

Gonorrhœal Tubo-Ovarian Abscess.—Dr. Howard A. Kelly of Philadelphia reports a case treated by laparotomy and removal of fallopian tube and ovary. The paper appears in the *Phila. Med. News* for August 21st, 1886. The case is interesting, as being one of very difficult nature, admirably and successfully managed. The disease began two weeks after marriage, at the first menstrual period, with severe pain in the hypogastrium. There was profuse, protracted and painful menstruation, with foul-smelling discharge. A careful bimanual examination revealed the uterus erect, fixed, and forced strongly to the left of the pelvis. A boggy, firm mass occupied the right and back sides of the pelvis. Rectal tenesmus was severe. These symptoms had continued for many months, with great failure of general health. The operation was tedious and difficult from extensive adhesions. During removal of the mass, which was an abscess of the tube and ovary, it burst, and a discharge of very fœtid pus took place. This was removed, the tube and ovary ligatured, and the pus-secreting surface on the floor of the pelvis scraped thoroughly with the finger. The abdominal cavity was thoroughly washed out with warm water, and a glass drainage-tube carried to the surface, whence the diseased mass had been removed. The patient was quite ill for two days, and then made a rapid recovery.

I saw, during the present summer, Mr. Thornton of London treat a similar case, except that the abscess cavity communicated with the vagina. The pus in this case was horribly fœtid. The pus secreting surface, after the ligature and removal of the diseased tube and ovary, was dosed with strong iodine and corrosive sublimate solution, and then the abdominal cavity thoroughly washed out and drained. This case also recovered.

Extirpation of a large Polypous Myoma of the Uterus by Laparotomy.—This is the title of a short paper in No. 31 of the *Centralblatt für Gynäkologie* for the current year. The author is Dr. W. Nagel. The case occurred at Dr. A. Martin's private klinik for diseases of women in Berlin, and he was the operator. The paper first presents the report of a fatal case of vaginal removal of a similar tumor. Total necrosis of the recto-vaginal septum had occurred as a result of the severe injury the part sustained during extraction, aided by the anæmic condition of the patient. This induced Dr. Martin to try another procedure. The patient, aged 55, had had for many years profuse menstruation. This had ceased in 1884, but for two years there had been a profuse, fœtid, purulent and bloody vaginal discharge. A nodular tumor filled the pelvis and extended above the umbilicus. The vagina was very narrow and rigid from senile changes. Operation on the 10th July, 1886. Abdominal section and eventration of intestines, which were covered with a warm carbolized towel. The uterus and tumor were then packed about with sponges and drawn forwards, and the posterior wall of the uterus cut open and the tumor enucleated. The uterine mucosa was then disinfected and curetted, and the vagina thoroughly washed out. The uterine wound was next closed by a continuous silk suture. Bleeding was not severe at any time. Careful toilette of the peritoneum and closure of the abdominal wound, which completed the operation in 32 minutes. The tumor was a pure myoma, weighed 940 grammes, and measured 19 x 12 x 8 centimetres. The patient recovered without a bad symptom. There can be little doubt that in certain cases, as under the conditions of the vagina in this case, the method of operation here adopted is much the safer.

Removal of the Ovaries for Cavernous Myofibromata.—There is no doubt of the great frequency with which myomata have their symptoms removed and shrink very much or completely disappear after this operation. Such a result has not been so certainly known with reference to cavernous myofibromata, but two very successful cases have been recently reported

One of them was performed by Prof. Saxaiger. Another, by Prof. A. J. Lebedeff, was recently reported from St. Petersburg by Goldenberg. Castration was selected in preference to hysterectomy, because of its greater safety and frequent success in ordinary myoma. The result thoroughly justified the decision. For six weeks after the operation there occurred repeated, irregular, comparatively slight losses of blood, then complete menopause. The tumor gradually shrunk, and on dismissal of the patient six weeks after the operation it was reduced to the size of the head of a six months fœtus. Health was completely regained at home. These cases are an important contribution to the literature of this most valuable operation.

The Treatment of the Hysterical Paroxysm.—Ruault of Paris, in the *Abeille Médicale*, No. 42, 1885, describes a method he has found most successful. It consists in forcible compression of some superficial nerve, especially at its point of emergence. The most suitable is the supra-orbital The head of the patient is fixed with both hands, the thumbs being applied over the supra-orbital notches, where they are made to exercise steadily increasing pressure. The effect is as follows: The patient begins to twitch the facial muscles, she shrieks, two to four short inspirations occur, the thorax remains a few seconds in the condition of inspiration, simultaneously the muscles of the back contract, extending or hyper-extending the spinal column, then follows a deep expiration, the muscles relax, and the fit is over. In many cases the compression must be repeated, as the fit recurs. The method is more efficacious the earlier it is applied after the commencement of the fit. Ruault succeeded by this method in arresting an attack of hysterical dyspnœa with threatening asphyxia, and in the same patient an attack of delirium with hallucinations.

Drainage of the Vagina in Carcinoma of the Uterus.—Dr. Wyman of Detroit (*Medical Age*, No. 22, 1885) has repeatedly succeeded in arresting the fœtor of the discharges in this disease, by laying a drainage-tube in the vagina. The outer end of the tube is enveloped in a mass of cotton wool, which is frequently changed. Not only was the fœtor controlled, but the general condition of the patient was often sensibly improved.

The Prevention of Pendulous Belly in Women.—Sceptics as to the efficacy of the obstetric binder in preventing this condition may be interested in some observations of Prof. Czerny of Heidelberg which appear in the *Centralblatt für Gynäkologie*, No. 3, 1886. The professor states that he frequently has occasion in private practice to see English women, and that he has often been struck by the tense condition of the abdominal muscles even after repeated pregnancies, while German women, even after a few pregnancies, present quite the opposite condition. A year ago, while examining an English lady, the mother of nine children, whose figure was equal to that of any young girl, he was particularly struck with the fact, and on expressing his amazement, the lady described the English custom among the upper classes of invariably applying a firm binder immediately after labor, and keeping it accurately applied for at least eight days. Prof. Czerny in consequence strongly advocates the use of a binder not only during the first week after confinement, but for several weeks afterwards, and concludes by alluding to the great importance of maintaining the integrity of the abdominal muscles, if child-bearing women are to be kept in health and comfort.

The After-treatment of Severe Laparotomies.—Prof. Müller of Berne read a paper on this subject before the first meeting of the German Gynæcological Society, held at Munich last June. Müller spoke of the complications referable to interference with the functions of the intestinal tract as being the most important and the commonest. These arise from inflammation about the pedicle and adhesion of coils of intestine to the pedicle or other raw surface. Especially dangerous in this connection are those cases in which extensive raw surfaces are left by the separation of adhesions of long portions of intestine. Prolonged rest of the intestine after the operation conduces to adhesions. He had seen two cases fatal from this cause. To reduce the danger to a minimum, he advises omitting the bandage and any other means for the compression of the abdomen, and further believes that good may be done by injecting into the abdominal cavity for the first few days an aseptic, non-irritant, non-toxic and easily absorbable solution. In one case he injected a sterilized 0.7 per cent. solution of sodium chloride in the quantity of 2,400 grammes. The immediate effect was acceleration of pulse and respiration. These were due to rapid absorption, not sepsis. This could be prevented by repeated injection of moderate quantities of fluid and allowing it to escape through a drainage-tube. (*Cent. f. Gyn.*, No. 26, 1885.)

I cannot but think that such a practice is unnecessary if opium be entirely withheld and purgatives and repeated turpentine enemata be administered to stimulate the peristaltic action of the intestines. There can be no doubt that the routine use of opium has cost ovariotomists many lives from the enforced rest of the intestinal tract permitting the formation of adhesions.

A new Surgical Treatment of Retroflexion of the Uterus.—(*Berlin Klin. Woch.*, No. 18, 1886.)—Von Rabenau died on the 13th April, 1885, and left the manuscript of a paper describing a new operation for this deformity. He advises it in those cases (by no means rare) in which, for various reasons, a pessary is not available. It consists in excision as high as possible, say 4 cm., of the anterior wall of the uterus. The immediate effect is to straighten the uterus completely, which is explained by the fact that in retroflexion the greater convex anterior wall is so diminished in extent by the excision as to become smaller than the posterior. After the operation, the posterior wall becomes convex and the anterior concave, which corresponds to natural conditions. So much for the theory and anatomical basis of the operation as laid down by the author. The three operations he performed were done by him when suffering from a painful disease, and he had not the opportunity to observe the results. Peltzer, his assistant, reports the result in the total six cases, three of which were done by himself. It was, as a general rule, unsatisfactory. Obviously it is unsuitable for young women, inasmuch as the mutilated condition of the uterus must seriously interfere with the function of child-bearing.

Hospital Reports.

MONTREAL DISPENSARY—DEPARTMENT OF GYNÆCOLOGY.

CASES UNDER THE CARE OF DR. ALLOWAY.

CASE I.—A handsome, well-nourished young woman, aged 20; married two years; has never been pregnant; complains of headache, pains in iliac and lumbo-sacral regions, a tired feeling and inability to do her ordinary housework. Her menstrual periods are fairly regular, sometimes, however, returning in the third week. The flow is profuse, as a rule, and is preceded by severe dysmenorrhœal pain, which decreases in severity as the flow becomes well established. Dyspareunia and frequent micturition complained of.

Examination.—External parts small; cervix normal; no catarrhal discharge, nor erosion. Cervix very low down in the pelvis, and looking in the direct axis of the vagina or pelvic outlet. The fundus inclines backwards in a slightly retroverted position. In examining the fornices with the finger, the uterus and whole pelvic floor seem much limited in movement, and exceedingly tender, the patient evincing severe pain on upward pressure. In the position of the base of each broad ligament is felt the so-called induration or callosity of chronically inflamed tissue. The posterior *cul-de-sac* is practically obliterated, and the part is exceedingly tense.

Diagnosis—Chronic pelvic peritonitis, probably involving the ovaries and fallopian tubes to a slight degree, and originating from a past attack of endometritis.

Treatment.—The treatment of this case consisted in columning the vagina carefully with a tampon of boro-glyceride. The tampon was applied twice a week, and beginning with slight pressure, gradually increased until, in the space of ten weeks the whole vaginal vault and pelvic tissues generally, were quite pliant, moveable, and free from pain on digital pressure. I should have liked to have now dilated forcibly the cervix and curetted the endometrium, but as the patient had no comfortable home, I discharged her practically in good health.

Remarks.—These simple cases of chronic pelvic inflammation, so long as they are not due to gonorrhœal infection, do very well on the boro-glyceride tamponade, care, however, is required not to begin with too much pressure, as you will be likely to set up a fresh attack of acute inflammation. The curative agents at work here are glycerine, through its affinity for water, and graduated pressure upon the œdematous and thickened tissue.

CASE II.—This case was a well-nourished young Englishwoman, aged 22. She had been married three months ago, and was now suffering from a most violent attack of acute gonorrhœa. There were no lumbar and iliac pains complained of. The vagina was intensely inflamed and discharging a creamy, purulent fluid. After the vagina was well irrigated, the os was seen to be discharging a glairy mucus, tinged with blood, and the lips inflamed and eroded. Further examination of the parts was not made at this sitting.

Treatment.—A small-sized Ferguson's glass speculum was introduced into the vagina, and a 40-grain solution of silver nitrate poured into it. This was done three times a week for the following two weeks, with warm water irrigations three times daily by the patient herself. She was now considered cured of the vaginitis and a digital examination made to ascertain the condition of the pelvic peritoneum and appendages. A most interesting condition was now discovered. The uterus showed all the evidences of Hegar's sign of early pregnancy, and on questioning the patient she acknowledged not having menstruated for eight weeks. To determine when this woman became impregnated is of some interest. It must have been before the attack of gonorrhœa showed itself, probably after the first coitus. It is also interesting to know that this fortunate impregnation saved her from the most serious injury which a woman can become affected with—gonorrhœal salpingitis, peri-ovaritis, and pelvic peritonitis, with purulent collections and adhesions in the pelvic cavity. From an obstetric view, she will also become an object of much interest during the puerperium.

CASE III.—This was a French-Canadian, aged 44. She had the appearance of a woman who had suffered from excessive hemorrhage. She was very fearful of an examination being made, from a morbid dread of pain. She had been married seventeen years; had had five children at full term, and one miscarriage. Her youngest child was eleven years of age, and the miscarriage occurred about nine months after birth of this child. Since the birth of last child she has not been well; has had a profuse leucorrhœa to the present time. She ceased menstruating regularly about two years ago, but some nine months ago she experienced a very excessive flow, lasting almost continuously for three months. Since the cessation of this flow she has had no discharge of blood. She now complains of very severe pain in back and sides, so severe as to give her the appearance of a cripple coming into the room. She has constant attacks of retching, as a reflex neurosis, which causes her to have a starved look. On examination, a badly retroflexed uterus is found. The fundus is enlarged and exceedingly tender. The cervix has been lacerated bilaterally, but has cicatrized. There are no evidences of intra-pelvic adhesions, and the fundus is replaced to its normal position by placing patient in the genu-pectoral position, pulling the cervix well upwards towards the coccyx with a volsella, and forcing the fundus downwards and forwards with a finger in the rectum. In order to retain the uterus in this position, the vagina is tamponed in such a way as to prevent the fundus falling back again. This treatment was being carried out for some three or four weeks, the tampon being renewed once a week, when a return of the hemorrhage set in. The flow was continuous and severe for ten days, at the end of which time I curetted the uterus thoroughly with the sharp instrument, removing quantities of large and small fungosities. The uterus was then irrigated with 1 to 2000 sublimate solution. This metrostaxis was checked for about ten days, when it again became profuse. I again curetted and removed a large quantity of villous growths. Examination of these little bodies (millet seed) showed them to be of a benign nature histologically, and would indicate an *endometritis polyposa* of Olshausen. This interesting and prevalent uterine affection attacks the body of the organ only, as a rule. It is not confined to married women who have borne children, but is found often in maids past the menopause. A profuse leucorrhœa at this time is one of the most prominent and unpleasant symptoms complained of. It is a prominent link in the chain of pathological changes beginning with cervical laceration, then subinvolution, hyperplasia of stroma and mucous membrane, proliferation of glandular elements, vegetations and hemorrhage. It is here important to state that we must begin the treatment in the inverse ratio; beginning with removal of vegetations, and discharging the patient after the repair of the cervical laceration. The patient in question has had no more hemorrhage since last curetting (six weeks ago). She is improving in health, and will shortly be operated on for the cervical lesion, and replacement of the uterus.

CASE IV.—This patient is unmarried, aged 23, tall and spare. Her menses have been regular, but very scanty, lasting only one and a half days as a rule. There is leucorrhœa during the intermenstrual periods, also some irritation of bladder. She complains of backache, pain in inguino-ovarian and submammary regions, headache, and constipation. She is a bottler in a patent medicine establishment, and cannot do her work, although it is not very laborious. Vaginal examination reveals a cervix extensively eroded, and a thick glairy mucus issuing from the os. The pelvic floor is tense and very tender to digital manipulation, but no distinct intra-pelvic nodules can be felt. The uterus is in its normal inclination forwards, but much limited in its movement, and painful when moved with the sound. This patient left the klinik without treatment, but returned in two months afterwards much worse. There was now a slight vaginitis, which was not gonorrhœal. She was advised to remain at home in bed for a week under Emmet's treatment of hot-water irrigations three times a day. At end of this time she appeared at the klinik much better. The pelvic floor was, however, still tense and exeeedingly tender. The boro-glyceride tampon was gently applied, so as to raise somewhat and support the inflamed parts. This treatment was continued for two months, reapplying the tampon twice weekly. The pelvic floor was now quite soft and free from tenderness on pressure. The uterus, with a volsella fixed in the cervix can be elevated, and drawn down almost to the introitus of vagina, without causing pain. It was now thought safe to curette the endometrium, removing shreds of hyperplastic mucous membrane. The uterus was irrigated with sublimate solution as usual after curetting, and the patient discharged after a few applications of Churchill's iodine during the following two weeks. I do not think this patient had gonorrhœal disease, because the pelvic inflammation would not have subsided, with that disease as a cause, as it did. The cause here, in all probability, was a continued series of recurring pelvic congestions from cold, fatigue, and such like accidents, beginning as a vaginitis or endometritis, the diseased condition passing up the fallopian tubes to the peritoneum covering the ovaries (periovaritis), broad ligaments and adjacent parts. In time there is an exudation of plastic matter thrown out, causing all of these parts mentioned to adhere together in one organized conglomerate mass. In very chronic untreated cases, these masses are felt through the fornices of the vagina, especially when due to gonorrhœal disease, and were supposed to have been situated in the parametric tissue proper of Virchow (*Emmet*), but are now incontestably proved to be due to agglutination of the ovaries, fallopian tubes, and any part covered with peritoneum falling into the pelvis (*Polk*). If this condition is recognized early, and it is not due to gonorrhœa, then, under the treatment described and carried out in the present case, organized adhesions may be avoided and the patient relieved. This relief, however, may not be permanent, rendering treatment necessary on return of the disease.

Reviews and Notices of Books.

Paralyses: Cerebral, Bulbar and Spinal. A Manual of Diagnosis for Students and Practitioners. By H. C. BASTIAN, M.A., M D., F.R.S., Professor of Clinical Medicine and Pathological Anatomy in University College, London; Physician to University College Hospital and to the National Hospital for the Paralyzed and Epileptic, &c. With numerous illustrations. New York: Appleton & Co.

This work is intended to be a guide to the practitioner when called upon to make a diagnosis as to the seat and nature of the different forms of paralysis. A work to thoroughly cover such an extensive field, and to represent even the present state of knowledge, must be one compiled by a physician who has labored long and earnestly in this department. This, Dr. Bastian has done. He produces a work which represents a great amount of industry. The work, we are confident, will be a very important aid to those practitioners who desire, in making a diagnosis, to go beyond simply the name "paralysis." Any who consider anything additional of little use will be foolish to buy Dr. Bastian's work. Fortunately, however, the day is past when even patients are satisfied with the simple expression that they are paralyzed. They want to know all about its origin and probable course, and as an aid to the often great difficulties that present themselves to the physician in those cases, we know of no better work than the one under notice. Not only is the general subject of paralysis fully dealt with, but, in addition, we have some very able notices of collateral subjects. We would especially mention that section dealing with aphemia, agraphia, aphasia, and amnesia—subjects that the author has done much to elucidate.

It is impossible, in the space at our disposal, to even indicate the general plan of the work. The subject of cerebral paralysis receives by far the greatest consideration, about three parts of the work being taken up with it. The spinal and peripheral palsies receive a fair share of attention, but we have noticed that the author has not the same acquaintance with the modern literature in this department that he has in the cerebral part.

In a work which is intended to be a thorough guide, more should be said of the value of electricity in determining the causation of the different varieties of paralysis.

A Text-Book of Human Physiology.—By PROF. LANDOIS. Second American translated from the fifth German edition, with additions by PROF. STIRLING. In one volume. 583 illustrations. Philadelphia: P. Blakiston, Son & Co.

This work has gone through several editions in Germany, proving its adaptability to its native soil; and the fact that Professor Stirling's translation of it has so soon passed into a second edition, is evidence of its popularity in its English dress. The second edition appears in one volume, and many will judge this an improvement on the original two. This work is now the largest, most profusely illustrated, and most comprehensive text-book on physiology in the English language. It is specially well adapted to the practitioner of medicine, since it furnishes at once a tolerably complete and at the same time compact statement of what is known in the various departments of physiology. The practitioner will also find accounts of the methods of investigation of the day, accompanied by the necessary graphic illustrations. Anatomy, especially microscopic, is treated in minute detail, another recommendation in a book specially intended for the practitioner.

When Professor Stirling attempted in a work of this kind to notice the most recent researches, even those published in the English language, he essayed a very difficult task, and considerable allowance must be made for individual judgment as to what to insert and what to omit. This task, while fairly well performed, is, perhaps, the least satisfactory. Many researches equally important with those noticed, others tending to modify or to confirm those referred to, have not been mentioned. This certainly applies to not a few recent American investigations. Perhaps this is inevitable, but it is likely that a better balance will be obtained in later editions. We are glad to notice that the comparative element, which is daily growing in importance, has not been overlooked. The attempt to connect the normal and abnormal in a work of this kind will meet with great favor. It certainly will have the very much to be desired effect of leading the student of clinical medicine to see the bearing of physiology on his professional work. Not a few seem to have forgotten that until our physiology is more extended, and put, in many cases, on a firmer basis, pathology proper and clinical medicine must be much less scientific than they otherwise would be.

If the publication of Stirling's Landois accomplished no other end than that of leading the profession of medicine to see this connection, it would repay manifold the labor spent upon it. We wish the work well.

Analysis of the Urine, with special reference to the Diseases of the Genito-Urinary Organs.—

By K. B. Hofmann, Professor in the University of Gratz, and R. Ultzmann, Docent in the University of Vienna. Translated by T. Barton Brune, A.M., M.D., Lecturer on Clinical Medicine in the University of Maryland, and H. Holbrook Curtis, Ph.B., M.D., Fellow of the New York Academy of Medicine, &c. Second edition, revised and enlarged. New York: D. Appleton & Co.

For the every-day wants of the practitioner, we know of no manual on urinary analysis that equals Hofmann and Ultzmann's work. The authors are well-known men in their respective departments, Hofmann being Professor of Medical Chemistry in Gratz, while Ultzmann is director of the Polyclinic for Diseases of the Genito-Urinary Organs in Vienna. The second edition contains all the important advances that have been made in the examination of the urinary constituents during the past three years. One of the most important sections of the work is that devoted to an account of the microscopical and clinical aids for the diagnosis of the different forms of albuminuria. The translators are to be congratulated on producing a very clear and readable rendering of the original.

Books and Pamphlets Received.

A Treatise on the Principles and Practice of Medicine. By Austin Flint, M.D., LL.D. Sixth edition, revised and largely rewritten by the author assisted by Wm. H. Welch, M.D. Philadelphia, Lea Bros. & Co.

A Treatise on the Practice of Medicine, for the use of Students and Practitioners of Medicine. By Roberts Bartholow, A.M., M.D., LL.D. Sixth edition, revised and enlarged. New York, D. Appleton & Co.

A Laboratory Guide in Urinalysis and Toxicology. By R. A. Witthaus, A.M., M.D. New York, Wm. Wood & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, June 11th, 1886—Concluded.

T. G. RODDICK, M.D., PRESIDENT, IN THE CHAIR.

Successful Ovariotomy in a Pregnant Phthisical Woman.—DR. GARDNER related the case as follows:

Mrs. A., mother of two children, youngest being 10 years old, has suffered for many years with cough, hæmoptysis, and purulent expectoration, together with the physical signs of phthisis. A tumor was diagnosed five years ago by her family physician. Was seen a year ago last March by Dr Gardner; at this time an operation was not recommended, for, besides the patient's general health being bad, the tumor felt as if there were adhesions in the pelvis. Her menses ceased last February, and the symptoms of pregnancy came on. She suffered much from nausea and vomiting, and also orthopnœa. Something had to be done to relieve this last symptom. Dr. Gardner considered his best course was to operate, and not to induce premature labor, as some recommended. Two weeks ago, with Drs. Roddick and Bell assisting, he performed ovariotomy. On opening the abdomen, the dark brownish-red uterus contrasted strongly with the pearly glistening tumor. No adhesions existed, and there was a good pedicle. Convalescence was perfect. The temperature never got above 99°F. There was very little vomiting, and the ether did not affect the lungs. The stitches were removed on the seventh day. Her breathing became easier, and the cough and expectoration lessened.

Three Cases of Cysts of the Broad Ligaments.—DR. GARDNER briefly related three operations he had recently performed for cysts of the broad ligaments. The first case was that of an ordinary cystoma, which he enucleated, a good convalescence following. The second case was one where he intended opening a deep abscess, but, after getting into the abdomen, found a cyst above it; this he opened, and stitched its walls to the abdominal opening. Through drainage was maintained by tubing through the abdominal opening, cyst, abscess cavity, and out through Douglas's pouch and the vagina. In this case convalescence was slow. The third case was a large sessile cyst, which was incised and stitched to the sides of the abdominal opening, and a glass drainage-tube inserted. Patient did well.

DR. HINGSTON then read a short paper entitled "*Some Remarks on Ovariotomy.*"

Stated Meeting, September 24th, 1886.

J. C. CAMERON, M.D., 1ST VICE-PRESIDENT, IN THE CHAIR.

Case of Congenital Wry-Neck.—DR. LAPTHORN SMITH exhibited a case of congenital wry-neck in an unmarried female, 26 years of age. Her father and mother are alive and well, and she is one of a large family, all of whom are alive and (except herself) in good health. Before her birth her mother received a severe fright, to which she attributed the girl's deformity. Ever since her birth, she says, she has been troubled more or less with a spasmodic condition of the right sterno-mastoid muscle. During the last few years the muscles of the face and throat have become involved, and now, even the muscles of the lower extremities are in a state of clonic contraction, which gives her a gait similar to that seen in locomotor ataxia. The patellar reflex is markedly increased. Were it not for this fact, and also for the fact that it was congenital, one might think that the disease was of an hysterical nature ; for it completely disappears when she is asleep, diminishes very much when she is not observed by any one, while when she comes to see the doctor, the spasms of her face and neck become so severe that her features are frightfully distorted and she appears to be in imminent danger of suffocation ; and, indeed, feels as if she could not get another breath. The muscles of the tongue are also affected, rendering her speech stammering. The muscles at the back of the neck, opposite to the affected side, have become enormously hypertrophied in their efforts to oppose the contractions of the sterno-mastoid. With regard to the prognosis, Dr. Smith said it was not favorable in these cases, operative interference being contra-indicated ; for as soon as the sterno-mastoid is cut, the disease invades some other muscle. The treatment, therefore, is nearly entirely medical. This patient has greatly improved under 20-grain doses three times a day of the mixed bromides of ammonium, sodium and potassium ; but nearly the whole list of narcotics have been recommended, such as chloral, chloroform, ether, morphia and atropine ; also tonics, such as iron, stychnine and arsenic. He was alternating the bromides with iron and strychnine in this case, bromism having shown itself. Dr. Hammond reports two cures with bromide of zinc, on which he mainly depends, electricity having failed in every case in which it was tried.

Ulcerative Endocarditis.—DR. SUTHERLAND exhibited the heart and a portion of the right lung from a case of ulcerative endocarditis. Patient, a man aged 35, came to the out-door department of the hospital complaining of being out of sorts, and said that three months ago he had been on a spree, and had slept on a bench in Central Park and there caught cold. At the hospital he was found to be slightly feverish, and was persuaded to go to bed. While the nurse was getting a bath ready he fell back and died immediately. On the endocardium of the left ventricle was a cauliflower excrescence one inch long and projecting about a quarter of an inch. There was also a similar, but older, looking excrescence on one of the aortic valves. Throughout the lungs were several small ulcerating cavities.

Ovariotomy; large Tumor.—DR. TRENHOLME exhibited an ovarian sac, removed from a lady at Levis on the 31st August. The sac and contents weighed over 70 lbs. This is the fourth operation since the last Society meeting; all the three previous patients made a good recovery. There were excessively firm adhesions of the sac to the abdominal parietes, intestines, diaphragm and liver, so strongly adherent that the sac had to be peeled off by reaching the posterior part and then working it off toward the front. The sac was also very friable, and in great part had to be removed piece by piece. This multilocular tumor had been repeatedly tapped, and was a good illustration of the bad effects of such treatment. The patient, though very feéble and exhausted, bore the operation well, and when Dr. T. left her, thirty hours after the operation, her pulse and temperature were almost normal, and she was feeling well and cheerful. There was very little tympanitis, but on the fifth day vomiting set in, and inability to take nourishment. Though the vomiting was not severe, the patient gradually failed, and died on the eighth day.

DR. C. A. WOOD then read the following paper on a

CASE OF CEREBRAL SURGERY.

I have made the presentation of a case of brain wound occurring in my practice the excuse for saying something to you about those recent advances ln cerebral surgery that have excited so much interest both in this country and abroad. For example, it was generally admitted that Prof. Victor Horsley's paper on this subject, to which I shall refer later on, was the most valuable contribution made to the surgical section of the British Medical Association during its late meeting in Brighton, and we have also daily evidence of the increasing interest in the surgery of the brain from the continual reference to it in our periodical medical literature. Of course I need hardly say that those with hospital and other extensive opportunities are most competent to give opinions of value in this department of surgery, and I trust my paper will at least be the means of eliciting expressions of opinion from gentlemen present who have the best right to speak. For the notes of the case I am indebted to my friend Dr. Hutchison, who had charge of the patient during my absence from the city, and who saw him almost daily during the entire illness:

R. R., aged 4 years and 2 months, was running along the street with a pea-shooter about 18 inches long and $\frac{3}{8}$ inch in diameter. He fell, and struck his head against the end of the tube held upright in his hand. The hollow cylinder passed through the left lower eyelid and entered the orbit about a quarter of an inch from the margin, inflicting an injury to the brain itself. The tube entered 2$\frac{3}{4}$ inches, and was with difficulty withdrawn by a neighbor, who, we afterwards learned, noticed upon the end of it some putty-like substance, mixed with blood. The accident occurred on the 10th May, about 10 o'clock, and he was first seen a few minutes afterwards. Child unconscious; extensive contusion of tissues surrounding wound; left pupil dilated, with no response to light. Right pupil is normal, and responds to light. Pulse very weak and slow, and vomiting almost constant. Respiration slow and labored. Dr. Wood took charge of patient at 10.30 A.M. There was then no response to light in either eyes, the left pupil dilated and immovable, child pale and restless, and the vomiting had ceased. There is slight proptosis. There was complete motor and probably sensory paralysis of right side, and convulsive movements of upper and lower limb, these movements being chiefly marked in right arm. The convulsions continued all day, and for a short time before they ceased there was simply spasm of right arm. At 9 P.M., right eye responsive to light; no convulsions; no return to consciousness; temperature 100°F.

May 13*th*.—Patient has remained in about the same condition since last note, but now shows signs of returning consciousness. Takes food with some difficulty, and when asked will protrude tongue, whose deviation to right side is marked. Bowels moved by enemata.

May 16*th*.—Eyes examined by Dr. Proudfoot. There is a slight serous and bloody discharge from the wound; the conjunctiva is much inflamed, and protrudes over the margin of the partially everted lid; the soft parts about the eye are greatly swollen and discolored. The apparent protrusion of the eyeball about the same as day of injury. Morning temperature 101$\frac{1}{2}$°F.

The inflamed conjunctiva was incised, and the wound kept open by cotton drain. A week after the accident, there is a slight return to consciousness; pulse 150, temperature 101½°F.

May 18*th*.—Temperature, 9 A.M., 103°F., pulse 150. There is no discharge from the wound. No vision in right eye. Child partially comatose. Requested permission to have wound opened for purpose of drainage, but it was refused. Child's condition worse.

May 19*th*.—Morning temperature 103°; evening 104°. Restless, head extended and drawn to right side, the muscular spasm being so great as to prevent its being drawn forward.

May 20*th*.—Temperature at noon 105°. Ordered 5 grs. quinine. Patient unconscious.

May 21*st*.—Dr. Proudfoot again saw the patient; made an incision over site of wound, introduced drain, and applied poultice. On the 22nd, there was a slight discharge of sero-pus from the wound, temperature fell to 103, and child became more conscious.

May 24*th*.—The discharge continues, but the temperature is 104°, and child's condition unimproved. This state of things continued until the 29th, when the child died comatose. To the great reget of Dr. H., he was unable to obtain a post-mortem.

There seems to me to be little doubt, however, that the track of the wound, after piercing the left lower lid, extended from a point midway between the outer and inner angles across the floor of the orbit, injured and possibly destroyed the optic nerves, caused protrusion of the ball, passed through the roof of the orbit close to the sphenoidal fissure, and entered the brain at a point in the frontal lobe, at its base, close to the fissure of Sylvius. With the exception of the monobrachial spasm, one could hardly further localize the injury. To suppose that the point of entry was through the sphenoidal foramen would be to admit injuries to the middle cerebral arteries and other structures at the base of the brain, inconsistent with the course which the injurious effects subsequently pursued. As Gowers points out, violence to the cerebral substance in the region of a motor centre will produce symptoms which are usually referable to lesions of the centres themselves. That the child died of septic meningitis appears to me to be also probable.

The question that naturally arises in a serious brain wound of this sort is, "Will any operative procedure be of use?" When Dr. Proudfoot first saw the case with me I urged the propriety of treating this injury as I would have done any other deep puncture. Here we had a penetrating wound of the orbit involving the brain, and my idea was to remove the useless eyeball and to attempt to set up at once direct drainage from the deeper parts of the wound, after it had been thoroughly cleansed and injected with a fairly strong antiseptic solution. I would then have dressed it after the strictest antiseptic style and waited results. The parents, however, refused to permit this, and Dr. Proudfoot was not, I think, very enthusiastically in favor of the scheme. And yet, while I am not given to talk about what might have been, I am now, knowing the results which followed the wound, perfectly satisfied that such a course would, under the circumstances, not only have been justifiable, but that in the light of recent knowledge have been the proper course to pursue. As in other situations, the dangers of deeply penetrating wounds are sepsis and inflammation. Here we had a case where the patient lived nearly three weeks after the injury, so that death was not caused by the first and direct shock, but probably by the train of evils brought on by septic material conveyed into the brain and along the whole track of the wound, causing inflammation of the meninges and possibly of the nervous matter itself. Septic absorption soon took place, the products of the inflammatory process were unable to find vent, and further absorption occurring, death was of course inevitable. That the plan of ample and direct drainage, with antiseptic dressings, in brain injuries is crowned with success in apparently hopeless cases, and that recovery would not otherwise have taken plaoe, seems to me to have been amply illustrated in recent years. This disregard of the *noli me tangere* rule which has so long obtained with most of the internal organs is now affecting the chief nervous centres, and no one can place limits upon the extent to which it may yet be carried.

As the subject is one of great interest to me, I should like to make a part of this paper the test for remarks which will bring out a discussion of these recent advances in cerebral surgery, and if you will permit me, I will say something about them.

Of course, as everybody knows, bold and successful deeds in brain surgery were not unknown to the older surgeons, but they were, when they occurred, classical exceptions to the rule that such treatment of the cerebral structures was in the nature of things fatal. From the time when Dupuytren plunged his knife into the brain and opened a cerebral abscess, giving relief to the symptoms and leading to the ultimate recovery of the patient, many surgeons have successfully imitated him. So, too, do we find many cases of severe brain lesions doing well under the older surgeons ; but there are just two factors in these cases which make the chief differences between the older procedures and the surgery of the present day—1st, more accurate diagnosis, and, 2ndly, antisepticism. A better definition of the situation, extent and character of a cerebral wound, abscess, tumor (whatever it may be), is possible in our time, chiefly because of the works of men like Prevost, Brown-Sequard, Hughlings-Jackson, Gowers and others.

All observers agree as to the special value of the antiseptic method in dealing with lesions of the brain. Packard says that wounds of the brain heal readily when secondary inflammation does not set in, and in speaking of their treatment, places great stress upon the employment of antiseptic dressings. Hughes-Bennett's celebrated case of brain tumor reported in the *British Medical Journal* for May, 1885, would have done better, said the operator, Mr. Rickman Godlee, if stricter antiseptic measures had been preserved. In a very clearly written article upon trephining (see *Annals of Anatomy and Surgery*, No. 3, Vol. VIII), Dr. H. B. Sands thus insists upon the special value of antisepticism when the brain is involved : " Aside from those cases," says he, " in which the brain has suffered irreparable damage, I think that in future many successes will be obtained by careful antiseptic treatment of the wound, such as recommended by Lister in the management of compound fracture of the bones of the extremities. The most scrupulous cleansing of the wound, the arrest of hemorrhage, the removal of foreign bodies, loose fragments of bone, and of detached portions of brain matter, if present, followed by proper drainage and dressings, is, in my judgment, the only means which, with our present knowledge, promises any benefit in this nearly desperate class of cases."

After one has borne in mind that trephining is now commonly resorted to for the opening of cerebral abscesses, for epilepsy—of the Jacksonian variety usually—where a traumatic cause can be assigned, that it was proposed by Gross in 1873, and I think has been resorted to since then for the relief of purulent meningitis, there remains another modern occasion for its performance which I shall close by speaking of. The attempt to remove a cerebral tumor by cutting down upon it after trephining was first made in November, 1885. From the article on brain tumors in Pepper's System, written by C. K. Miles and Hendrie Lloyd (the most concise treatise on the subject that I know of), a short account is given of this remarkable case, which may be taken as a type of hundreds of others known to medical readers. "Four years previous to death patient received a blow on left side of the head. A year later, twitching in tongue and left side of face. Later, twitching of left arm. Twitching increased, paroxysmal spasm, and general convulsions, with loss of consciousness. Paresis, and then slowly-developed paralysis of the forearm and arm. Some paresis of left leg. Double optic neuritis and violent headache." This patient was under the care of Hughes-Bennett at the London Hospital for Epilepsy and Paralysis. He diagnosticated brain tumor, and suggested its removal. Rickman Godlee trephined over suspected region, and removed a glioma the size of a walnut. The patient did well until a month after, when *hernia cerebri* supervened, and he died.

Mr. Victor Horsley, the Prof. Supt. of Brown Institute, in his paper, told how the brain was searched in a similar way in three instances, all of which recovered with distinct relief from the symptoms. The patients, who had epileptic attacks of varying degrees of intensity and frequency, were, in consequence of them, absolutely unable to do any kind of work, and their lives were made miserable.

The chief points of interest lay in the attempt to simulate the symptoms in monkeys by irritation of their motor centres. The epileptic seizures, the muscular spasms, the convulsions, the paresis,—all were successfully imitated by vivisection so as to demonstrate, by a plan not likely to be called in question, the exact situation of the human cerebral lesion. The wound in the scalp was made by a semi-circular sweep of the knife, as opposed to the crucial incision usually made, Mr. Horsley thinking that healing took place more quickly afterwards, and better drainage was in this way obtained. He laid considerable stress on the advisability of cutting through the brain structures parallel to the direction of the sulci, and said that hemorrhage was best arrested by filling the wound with a soft antiseptic sponge. To secure success, it was advisable to adhere strictly to the antiseptic plan throughout. The patients were exhibited, and in every case the motor and sensory disturbances were either entirely cured or so relieved that they were able to live comfortably and to do work. As Dr. Broadbent remarked in his address before the medical section of the British Medical Association, medicine and surgery are brought into specially close relations in these matters of cerebral tumors and lesions, which are medical as regards diagnosis, but surgical as far as effective treatment is concerned. So far as we yet know, brain tumors and other irritants of the cerebral centres, to be capable of sufficiently accurate diagnosis as to permit of their removal with success, must be situated in the motor zone ; they must not be too large, must be single, must not be too deep-seated, and must not be malignant. This may narrow the field down to a small array of cases, but in the meantime, while a more extended study of the cerebral functions will probably make diagnosis more easy and certain, it is something to have made worth living even a few lives otherwise doomed to hopeless misery. It may fairly be claimed, also, that the chief bugbears of the surgeon are secondary inflammation and sepsis—insurmountable obstacles they would be even if we could localize cerebral tumors with the most positive accuracy ; these are now guarded against as we guard against them in other departments of surgery, by following the common-sense rules of the antiseptic system.

Dr. Shepherd said that McEwen of Glasgow had implanted again the piece of bone removed by the trephine, previously breaking it into fragments, a good recovery following. Dr.

Shepherd mentioned a case under his care in the hospital where a man had been kicked by a horse, fracturing the bones of the skull in such a manner that one piece was overriding another; no symptoms following, he sewed up the external wound, a slight pad and bandage being placed over all. In about ten minutes the man had an epileptiform convulsion; pressure being removed, he got well and recovered completely. Another case, a man had his frontal bone crushed in from a fall of 40 feet. He remained insensible for a few days, but got perfectly well. The wound was cleansed with solution of bichloride of mercury and iodoform gauze applied.

The CHAIRMAN said that Horsley laid great stress upon removing brain substance where it appeared to be affected, particularly in removing brain tumors.

Aneurisms of the Aorta.—DR. KENNEDY said he had been recently asked to be present at a post-mortem examination of a man who died suddenly. The skin was yellow. There was fatty degeneration of the liver. The right lung was collapsed, and that side of the chest filled with blood from the bursting of a large aneurism of the descending aorta. A second aneurism also existed of the abdominal aorta. Dr. Kennedy understood that aneurism had never been diagnosed during life.

DR. GEO. ROSS said that nearly eighteen months ago he had treated this man for aneurism, and with relief to the symptoms. He gave him iodide of potassium, with rest. When first seen, the man complained of rheumatism of left shoulder-blade; the pain was severe and neuralgic. He made out no bruit from the aneurisms, but downward a double, soft basic murmur. When last seen by Dr. Ross (last spring), the man was taking morphia for the relief of the intense backache.

A case of true Scurvy; death, with obscure brain symptoms; a large blood-clot found in the right temporo-sphenoidal lobe.—DR. R. L. MACDONNELL related the case as follows: W. P., a farm-laborer from the Eastern Townships, was admitted to the Montreal General Hospital Sept. 18th, 1886, complaining of general debility and the presence of an eruption on his face and the upper part of his body. Two years ago he had rheumatism, and for several years has had a slight cough. For the last 12 months his diet has consisted exclusively of bread and butter, milk, tea, sugar, no vegetables except potatoes, and no meat whatever, either fresh or salt. About the 15th of July last he began to feel weak, drowsy and indisposed for work. A slight cough was present, with blood-stained expectoration and frequent epistaxis. The gums then became soft, tender, and prone to bleed easily ; some slight ulceration being also present. Spots and patches of "black-and-blue"-like bruises appeared first upon the legs, subsequently over the whole body, more especially on the chest, where the largest patch was about three inches in diameter, the smallest the size of a pin's head. At this time his general strength was fair and his appetite good. There had been but one syncopal attack, and that occurred the day after his admission to hospital. *Present condition*—Emaciation considerable ; his usual weight being 160 lbs., he weighs at present but 133 lbs. Skin dull and pasty ; eyes sunken ; mucous membranes anæmic. In the mouth, more especially upon the palate, there are several petechial extravasations under the mucous membranes. The gums are pale, spongy, receding, and ulcerated at the edges. Over the body generally there are numerous small purplish patches, but no large bruise-like surfaces as were formerly said to exist. Examination of lungs negative. There was a well-marked systolic murmur heard with maximum intensity at apex, also at base, and for a short distance towards the left axilla. The urine was pale in color, with little or no deposit on standing ; no albumen, no sugar. The blood cells number 2½ millions to the cubic millimetre. *Treatment*—The patient was kept in bed and placed upon the full hospital diet, with extra vegetables, lemons and other fresh fruit. An iron and quinine mixture was ordered. *Sept.* 22—Patient fainted this morning, and afterwards had a slight chill. Severe frontal headache set in, accompanied by obstinate vomiting. At mid-day the pulse was 66, and weak ; extremities cold ; rather stupid, but not comatose ; no paresis perceptible. Ordered hot bottles and a stimulant. For the rest of the day the condition did not improve, and at 2.30 A. M. on the following day died without showing any evidence of unilateral disease. *Post-mortem appearances*—Large hemorrhage into the right cerebral hemisphere, under the lateral ventricle. Hemorrhagic infarcts in both lungs, especially the right. Sub-pericardial hemorrhages, especially over the left ventricle. A few subcutaneous hemorrhages. Body well nourished, warm, rigor mortis commencing ; a number of commencing petechiæ and vibices chiefly on the front of the chest, belly and legs. There was nothing abnormal found in the abdominal cavity beyond that the bladder was very much distended. Thorax—Heart : Left chambers empty and contracted ;

the right full and dilated. The natural heart muscle can hardly be seen owing to the many extensive hemorrhages under the pericardium. Lungs: The right shows many infarcts, which appear recent, the largest, at the base of the lung, measures 1¾ inches. The whole posterior part of the lung is œdematous and passively congested. The left is in a similar condition, but there are fewer infarcts. No subpleural effusions, and very little serous fluid in the pleuræ and pericardium. The aorta in no place blood-stained. Brain: In removal, the saw opened a cavity in the right hemisphere, whence blood and broken down brain matter, in no way altered or decomposed, made its escape. There were no subdural or subpial hemorrhages, and a careful dissection showed that the ventricles, though full of blood and serum, were normal; but under the right lateral ventricle there is a large cavity, with ragged walls, occupying the whole of the right temporo-sphenoidal lobe, extending forward into the frontal and back into the occipital lobe; the lower part of right hemisphere is reduced to a mere shell; the upper part above the ventricle intact. All parts of the brain are unusually vascular.

DR. R. J. B. HOWARD exhibited the heart, right lung, and brain, and described the post-mortem appearances.

DR. GURD asked if this could not be a case of simple purpura hemorrhagica.

DR. SMITH said it was unusual to see scurvy in a person living upon the diet said to have been used by this patient. Sailing vessels were not bound by law to carry lime-juice if they had potatoes.

DR. R. L. MACDONNELL thought the whole history of the case pointed to its being scurvy, and DR. HOWARD said that the post-mortem examination gave evidences of this disease.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

(From our own Correspondent.)

On the invitation of the Ontario delegates sent last year to Washington, the American Public Health Association held its annual meeting at Toronto on the 4th ult., while at the same time the annual conference of the State Boards of Health took place. The Association held its meetings in Shaftesbury Hall, a roomy building, well provided with lecture halls, reading-rooms, and, in fact, everything necessary for the requirements of a meeting of this nature. The States of the Union were all represented, as well as the U S. army and navy, at the conference of the Health Boards, the Province of Ontario, as well as Quebec and New Brunswick, counting each as a State. There being no Health Board in Quebec, Dr. Montizambert, of the quarantine service, represented his Province.

It is a remarkable fact, and one highly discreditable to the government now seeking a return to office, as well as to the people of the province, who have it in their power to make the government do their bidding, that Quebec, which, during the past year, had the largest death-roll from preventable disease ever seen in modern times, should have, at this very critical time, no Board of Health whatever, the Conservative government having thought fit to allow the Central Board of Health to be dissolved at the expiration of its term of office on the 4th of September last.

The meeting was opened by the new president, Dr. Walcott, of Cambridge, Mass., the first subject discussed being the destruction of night-soil and garbage by cremation, a matter interesting to us here, for it was stated that the plan was already carried into practice, and that successfully, in Montreal.

The Toronto trunk sewer scheme, introduced in a paper by Mr. Allan MacDougall, C.E., occupied a great deal of the time of the meeting, and met with thorough discussion.

At the Committee on State Boards of Health, an important report was presented on "Interstate Notification on the Outbreak of Smallpox, Cholera and Yellow Fever," and it was in the discussion of this report that a statement was made to the effect that the State Board of Health of New Hampshire, not having been notified of the outbreak of smallpox in Montreal, was obliged to proceed there to obtain necessary information for itself. This charge was met by a contradiction from Dr. Rodger of Montreal, supported by the representative of New Hampshire. The State Board had been warned, not by the Central Board of the Province of Quebec, because it was not in existence at the time, but by the transportation companies, and it was at their invitation that the State Boards came to Montreal and made their inspection.

Among the more important papers were those of Dr. D. Prince, of Jacksonville, Illinois, "An Experimental Study in relation to the removal from the Air of the Dust or Particulate Material supposed to produce Yellow Fever, Smallpox, and other infectious diseases"; of Dr. G. B. Thornton, on "Six Years of Sanitary Work in Memphis," and a highly instructive address by Dr. Russell, Health Officer of Glasgow, on the sanitary condition of that city.

At the close of the meeting, a resolution was adopted that it is "the opinion of the Association that an examination as to protection by vaccination of all passengers arriving from Europe, cabin passengers as well as others, should be enacted at all ports and in all cases, even if no cases of smallpox have occurred on the passage." A resolution was also adopted "that all rags regarded as suspicious and capable of having infection should be disinfected before being allowed to enter the country, and that in the present state of knowledge as to the possibility of thorough disinfection it might be sufficient to disinfect the exterior of bales at the quarantine station and to complete the disinfection at the manufactories."

Socially, the meeting was most successfully carried out. The ladies of Toronto gave two receptions—one at the Yacht Club and the other at the Rossin House.

The president's address, an exhaustive review of the progress of sanitary science, was delivered, together with those of the president of University College and others, at a conversazione held in the Normal School.

Hospitalities of all kinds were in various directions extended to the visiting members, so that the meeting of the Association in Toronto cannot fail to be regarded as eminently successful.

Dr. Sternberg, of the U. S. army, was elected president for the coming year.

CANADA

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PLAGIARISM EXTRAORDINARY.

It is not often that we have to speak disparagingly of the introductory lectures delivered at the opening of the session of the medical schools, but this year we feel compelled, for the sake of common justice, to expose a case of the most barefaced plagiarism, in the form of an introductory lecture, that it has ever been our misfortune to meet with. This lecture was lately delivered at the opening of one of the largest medical schools in Ontario, and is published (in full) in the *Mail* of October 2nd, 1886. On reading over the lecture, it struck us as somewhat familiar, and on examination we found that the whole lecture was "cribbed" bodily from Holden's Osteology and Sir Charles Bell's Bridgewater Treatise on "The Hand." The lecturer rings the changes on these two books, and whole pages are extracted verbatim, the personal pronoun "I" being, of course, left out. The only original portions of the lecture are occasional sentences, suitable for missionary meetings, and interpolated at proper places, which speak of the beauty and perfection of design in the work of creation, in, for instance, supplying blood to the several parts of a long bone, or the wisdom and goodness of an All-wise Providence in adapting the various bony structures of men and animals to the duties they have to perform, etc.

We have always been of the opinion that introductory lectures should endeavor to give the student some information and advice concerning the course of study he is about to enter on, and this new departure in introductory lectures is not to be commended. It is bad enough to steal the product of other men's brains and pass them off as one's own, but it is a great mistake to publish the fact abroad. We trust that the learned gentleman who delivered this lecture will, in future, take his material from less known works, and such as are not commonly used as text-books.

ON THE NATURE OF THE GLOMERULAR ACTIVITY IN THE KIDNEY.

Two widely differing views on the above subject have been maintained by schools of physiology headed by Ludwig on the one hand, and by Bowman, Heidenhain and Nussbaum on the other. Ludwig held that the glomerular activity was almost, if not quite, purely mechanical—a filtration process.

Bowman was the first to point out that there was a double renal vascular supply in fishes, batrachians and ophidians. 1st, From the renal artery to the glomeruli. 2nd, From the renal portal vein and the lumbar veins, which communicate with the *vasa efferantia* from the glomeruli, and assist in forming the capillary network around the tubuli uriniferi.

Nussbaum, availing himself of these facts, attempted to determine by ligature of the renal arteries the course certain substances take in being eliminated by the kidneys. His brilliant work held sway up to a very few months ago, when the correctness of his conclusions was put to the test by J. G. Adami. The latter has detailed the results of his work in a lengthy paper published some months ago. The research was carried out in the laboratory of Heidenhain, the most acute, perhaps, of living German physiologists.

Adami's experiments were performed on both frogs and dogs ; and great as were the difficulties of operating so as to maintain a normal condition of the kidneys and of the animal generally, the author thinks this was accomplished. He first repeated Nussbaum's celebrated ligature experiments, and concluded that the anatomical basis of this physiologist's work was unsound. In opposition to Nussbaum, he finds that after ligature of the renal arteries in frogs the glomeruli are not completely cut off from the circulation. It would appear that after a few hours vascular connection between the capillaries around the tubuli and the afferent vessels of the glomeruli are opened up. It follows that Nussbaum's conclusions as to glomerular activity have no longer the basis their author claimed for them. Adami found that after ligature of the renal arteries in frogs, secretion of urine, though at first arrested, was re-established, and in a few days became all but normal. He concludes, then, that the secretion is not dependent on the blood pressure, as Ludwig maintained, but upon the *rate of the vascular flow.*

Again, after ligature of the renal arteries, hæmaglobinuria phenomena appeared after the injection of " laky" (hæmaglobin dissolved out of the corpuscles) blood; that is to say, with a greatly lowered blood pressure, and without a corresponding watery secretion. Microscopical examination showed, after the kidney had been boiled, blood menisci in the capsular chambers of the glomeruli. From this it is concluded, as was previously maintained by Heidenhain, that the *glomerular epithelium possesses a definite secretory activity.*

There must have been, in this case, blood-flow through the glomerular vascular knot. The experiments were repeated on dogs, and " in all the cases microscopic examination revealed indubitable hæmoglobinuria menisci lying in the capsule chambers of the glomeruli." The evidence in favor of the secretion of albumen by the kidney after injection was conclusive; but while there was some ground for believing that it is eliminated by the glomeruli, this was not ascertained beyond a doubt. After the injection of urea into the blood, the channels of the collateral circulation are expanded, and the glomerular epithelium is excited to increased secretion of water. It must be independent of blood-pressure, for the renal arteries were in this case also ligatured. The general result of Adami's entire research is to shake the mechanical theory of glomerular activity thoroughly, and establish firmer than ever the doctrine that the *epithelium of the glomeruli possesses definite secretory or selective functions.*

POST-FEBRILE NEURITIS.

One of the most important advances made during the past year in neurology is the recognition of the great frequency of neuritis. It is now known that many forms of paralysis and disorders of sensation commonly attributed to cerebral and spinal changes are really due to inflammation of the peripheral nerves. It is only within a very recent period that alcoholic neuritis has been determined to be a distinct disease. Still later, we have proof that many cases of paralysis following the infectious fevers are really due to a peripheral neuritis. Of all the acute febrile diseases, diphtheria is the most frequently followed by these changes. So profound are they in the peripheral nerves after this disease at times that recovery is hopeless. The vast majority of cases, however, recover completely.

The paralysis which is occasionally seen following typhoid fever has been almost universally attributed to a subacute polio-myelitis, but from the recent researches of Pitres and Vaillard, it is plain that it is more frequently due to a peripheral neuritis. In several cases they found marked degenerative changes in the ulnar, musculo-spiral, peritoneal, saphenis and other nerves. These changes closely resemble those found in the nerves in cases of fatal diphtheritic paralysis. Not only is peripheral neuritis a frequent effect of the acute infectious diseases, but it is also seen in those of the chronic infectious class. The same observers have found degenerative changes during the course of chronic tuberculosis in the peripheral nerves.

THE "NATURFORSCHER VERSAMMLUNG."

At the fifty-ninth meeting of the "Versammlung Deutscher Naturforscher und Aerzte," recently held in Berlin, the number of members reached the enormous figure of 4,155, besides 1,496 ladies, making the largest meeting the association has yet known. The opinion prevails, however, that, having now reached the limit of its usefulness, it will begin to decline. The too large attendance prevents really efficient section work, although the number of sections has now been raised to thirty. The highest scientific work and the more important scientific discoveries are usually communicated to the specialized societies, and the "Naturforscher" is now practically a great pic-nic having a scientific flavor. It must be said, however, that the societies which have thus to some extent supplanted it have, without exception, been formed through its direct influence, and with a view to increasing the effectiveness of the sections in which they originated.

Prof. Virchow, as president, in an address delivered in the Circus Renz before an audience of 5,000, while alluding to the above facts, laid great stress upon the mutual advantages derived from the combination of the medical with the purely scientific element. A striking feature is the extreme simplicity of the executive, Virchow and Hofmann as president and vice-president making all the minor appointments, and, with the assistance of a further committee, having practically absolute control of the association's affairs. In the sections, any member who has specially distinguished himself during the day's proceedings is usually appointed chairman for the following day. A paper, the *Tageblatt*, published daily during the meeting, contains a systematic report of all papers read the day previous, making in all an issue of 440 folio pages.

The chief interest, however, was in connection with the entertainments provided for members. Besides receptions, excursions, yacht races, concerts and a ball, there was the annual dinner, to which 2,500 sat down in the Central Hotel; while the climax was reached when the city of Berlin entertained 7,000 persons at supper, down whose 7,000 scientific œsophagi glided the contents of over 27,000 wine-bottles bearing as labels "Lachrymæ Virchow" and "Hofmann's Tropfen"! Besides these more formal gatherings, each section had its own *kneipe* where every evening the members met to chat and drink the necessary beer and visitors received a hearty welcome. While, individually, the members took a keen interest in the prospects for the coming International Medical Congress, no notice was taken of it officially.

The next meeting will be held at Wiesbaden, with Professor Fresenius as president.

AMENDMENTS TO THE MEDICAL ACT.

The following is the text of the amendments to the Medical Act which were adopted by the Provincial Medical Board at its last semi-annual meeting:—

1. CENTRAL BOARD OF EXAMINERS.—The Board shall be known under the name of the Central Board of Examiners, and shall be composed of two examiners on each subject. The examination shall be conducted in the language of the candidate, provided that the two examiners have the right to examine alternately. If the examiners disagree, the examination on this subject shall be referred to the whole Board.

2. The Central Board of Examiners shall be composed of two representatives from each of the schools of medicine and an equal number of physicians not attached to any of these schools—in all, 20 examiners.

3. The members of the Central Board of Examiners shall be named annually by the Provincial Medical Board, the names of such examiners having been submitted by a committee, to be called the nominating committee, which shall be appointed by the President, subject always to the approval of the Provincial Board, and shall be composed of two representatives from each of the schools of medicine and of an equal number of members of the College not connected with such schools. In case of a vacancy in the Central Board of Examiners by death, absence from the Province, or otherwise, a substitute shall be named by the President.

4. The members of the Central Examining Board may or may not be chosen from amongst the members of the Provincial Medical Board.

5. The Central Board of Examiners shall commence the examinations upon the second Tuesday of April, and shall sit alternately at Quebec and Montreal.

6. The remuneration of the members of the Central Board of Examiners shall be ten dollars per diem, and travelling expenses at the rate of five cents per mile.

7. The professional examinations shall be divided into primary and final; the examinations shall be written and oral. The subjects entering into each of these examinations to be fixed by the Provincial Board.

8. The fees for the examinations shall be as follows: For the Primary Examination, $15.00. For the Final Examination, $10.00. For the Diploma, $25.00.

9. Preliminary Examination.—The preliminary Examination shall be held once annually on the first Wednesday in July, alternately at Quebec and Montreal. A supplementary examination shall be held during the last week of September for those who have failed in certain subjects, and candidates for this examination will be required to pay a further fee of $10.00.

10. Graduates in Arts from any of the Universities in Her Majesty's dominions shall not be exempt from passing the preliminary examination. The preliminary examinatton shall include the subjects which are now compulsory, and, in addition, physics, elementary chemistry, and intellectual and moral philosophy; there shall no longer be any optional subjects. The preliminary examination will be held on the first Wednesday in July in each year, alternately at Quebec and Montreal. The textbooks on intellectual and moral philosophy shall be those made use of in the English and French colleges respectively.

11. The Board of Governors shall meet annually, on the second Wednesday in May, at Quebec and Montreal alternately.

12. Election of Governors.—The affairs of the College shall be managed by a Board of forty members, elected for three years in the following manner: Two members each for the Universities of Laval (Quebec), Laval (Montreal), McGill, Bishop's and Victoria; four elected by the members resident in the city of Montreal, and four by those in the city of Quebec; one elected by the members residing in each of the following districts, viz., Montreal, Quebec, Gaspé, Saguenay and Chicoutimi, Rimouski, Montmagny, Beauce, Kamouraska, Terrebonne, Joliette, Bedford, Richelieu, St. Hyacinthe, Iberville, Beauharnois, Ottawa, and Arthabaska: two from the district of Three Rivers, and three from the district of St. Francis.

13. Two months before the election the Registrar shall furnish the Secretary for Quebéc with a list of all those qualified to vote in the city and district of Quebec, the districts of Gaspé, Saguenay and Chicoutimi, Rimouski, Montmagny, Beauce, Kamouraska, Three Rivers, and Arthabaska; and to the Secretary for Montreal, a list of the qualified voters in the city and district of Montreal, the districts of Terrebonne, Joliette, Richelieu, Bedford, St. Hyacinthe, Iberville, Beauharnois, Ottawa and St. Francis. One month before the election, he shall send printed ballot papers, which shall be signed by the voter and returned in a sealed envelope within the two weeks following to the Secretary, whose signature shall be found upon the ballot paper. The Secretary, upon receipt of such ballots, shall place them unopened in a ballot-box, which, locked, shall remain in the hands of the Secretary, to be opened only in the presence of scrutineers named for the purpose, who shall count the ballots and announce the names of those who have received the largest number of votes.

14. A printed list giving the result of the ballot shall be immediately posted to each voter. The election of Governors shall be held on the first Wednesday in September. The first meeting of the Board for the election of officers shall take place on the third Wednesday in September. The annual contribution shall be payable in advance, and every member of the College must have paid such annual contribution on or before the 1st May in order to have a vote and to be eligible for election. The scrutineers shall be named by the President at the meeting of the Board directly preceding the date of the election.

15. The amendments concerning the Preliminary Examination and the Central Board of Examiners will come into force on the 1st Jan., 1887.

16. Students of medicine shall be obliged to follow regularly courses of study during four academic years.

17. The subject of Botany is removed from the curriculum.

18. Any person duly registered in the medical register of Great Britain and having, consequently, the right to practice medicine, surgery and obstetrics in the United Kingdom of Great Britain and Ireland, shall have the right to registration in the Province of Quebec upon production of a certificate of registration as above: provided always that the same privilege be accorded to the members of this College. The Provincial Board shall also have the right to grant its license to the bearer of a diploma from the University of Paris, and who is duly qualified to practice in France. As soon as a Central Board of Examiners similar to that created under this Act, or a body duly recognized by the Legislature of one of the Provinces of the Dominion of Canada other than that of Quebec, as being the sole examining body for the granting of licenses, and under whom the curriculum is equal to that in the Province of Quebec, then the bearer of such diploma shall, due proof having been made, be entitled to register in the Province of Quebec, if the same privilege be accorded by such Board of Examiners to the licentiates of the Province of Quebec.

19. The new amendments should contain clauses of an explicit nature giving the Board similar disciplinary powers to those already possessed by the Bar and by the Board of Notaries. The clauses of the Act concerning quacks and irregular practitioners to be amended so as to become as effective as possible.

20. In clause 15 of the Medical Act, the word "gynæcology" to be added after the word "midwifery"; and in the same clause, after the words "medical jurisprudence," add the words "of sixty lectures."

CONGRESS OF SPECIAL ASSOCIATIONS.

A meeting of representatives from all the special associations in the United States was held at Washington on the 24th September last, when the project of holding a conjoint congress at stated intervals was fully discussed. The following resolutions were adopted :—

1. That it is desirable that the following Societies—
The American Surgical Association,
The American Ophthalmological Association,
The American Otological Association,
The American Neurological Association,
The American Laryngological Association,
The American Gynæcological Association.
The American Dermatological Association,
The American Climatological Association, and
The Association of American Physicians and Pathologists,
shall arrange for a conjoint meeting in the city of Washington, in the month of September, 1888, and subsequently at intervals of three years at the same time and place.

2. That this arrangement shall not interfere in any way with the autonomy of each special Society; and that each Society shall retain the right to withdraw at any time from this conjoint scheme.

3. That the special feature of the meeting shall be the conjoint assemblage of the special Societies on two evenings during the session ; on one of which there shall be an address delivered by the president of the conjoint meeting, and on the other there shall be communications by a referee and a co-referee on some subject of general professional interest.

4. That each special Society approving this report is invited to appoint one representative (with an alternate), and that the representative so appointed shall constitute an Executive Committee to serve for one year, with power to elect such officers for the first conjoint meeting as may be deemed necessary, to prepare a programme for said meeting, to make all other necessary arrangements, and to prepare and submit a plan of organization for future meetings.

5. That all expenses connected with the conjoint sessions shall be apportioned equally by the Executive Committee among the special Societies participating.

Obituary.

—We deeply regret to have to announce the death of Dr. John H. Christie of Chicago, eldest son of Dr. Thomas Christie, Lachute. Dr. Christie, who was a graduate of McGill University, has occupied a prominent position in his profession in the city of his adoption.

—Mr. S. S. Gamgee of Birmingham died suddenly on the 18th ult. He was in his 59th year, having been born at Florence in 1828. In 1857 he was elected to the post of honorary surgeon to the Queen's Hospital, Birmingham, a position which he held and adorned until his death. Throughout his professional career he was an able contributor to periodical literature. His principal work was on "The treatment of wounds and fractures of the limbs." An earnest advocate of "dry and infrequent dressing," he has done much to bring the present treatment of wounds to its high position. He was a man of great earnestness of purpose and a devoted student of his profession to the last.

Medical Items.

—A female patient recently died in a dentist's office in Brooklyn, N.Y., while taking ether for the extraction of a tooth.

—Sir William Stokes of Dublin, and Mr. Ernest Hart, editor of the *British Medical Journal*, have accepted the office of vice-presidents of the International Medical Congress.

—The number of medical students attending the different German Universities during the past summer session was as follows: Vienna, 2147; Munich, 1304; Berlin, 1175; Dorpat, 862; Wurzburg, 829: Leipzig, 690; Freiburg, 585; Gratz, 464; Greifswald, 461; Breslau, 391; Bonn, 349; Halle, 329; Marburg, 300; Konigsberg, 267; Heidelberg, 266; Kiel, 261; Strasburg, 246; Tubingen, 240; Gottingen, 234; Erlangen, 233; Zurich, 216; Berne, 203; Giessen, 140; Basle, 121; Ghent, 118; Jena, 114; Rostock, 100; Lausanne, 291.

—The recent meeting of the Association of German Naturalists and Physicians was the most successful ever held. The president, Prof. Virchow, delivered a very able address, which we will notice in detail in a future number. There were a large number of deeply interesting medical papers read. Prof. Hitzig of Halle read one on the present position of the cerebral localization question. He did not make a single reference to the labors of the English physiologists in this department. Judging from his paper, one would think that all this work had been performed by Germans. The English physiologists are just as narrow, for in the discussion which took place on the same subject at the late Birmingham meeting of the British Association no reference whatever was made to the work done by outsiders. Unfortunately for the cause of science, this narrowness is not confined to cerebral questions alone. Imagine the barrenness of a discussion on the cerebral centres of vision, where not a single reference was made to the work of Munk of Berlin.

CANADA
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Original Communications.

GLIMPSES OF ABDOMINAL SURGERY IN EUROPE DURING THE PAST SUMMER.

By William Gardner, M.D.,
Professor of Gynæcology, McGill University; Gynæcologist to the Montreal General Hospital.

(Read before the Medico-Chirurgical Society of Montreal.)

Mr. President and Gentlemen—At the request of certain members of this Society, I offer a brief narrative description of operators and some of the operations done by them which it was my good fortune to see during a recent visit to Europe. The pleasure of the task before me may be somewhat lessened when I reflect that I shall be giving descriptions of men and things actually seen by a few of the fellows of this Society, and repeating descriptions given by distinguished American gynæcologists who have also been abroad this season, and which nearly all of you have doubtless read. These descriptions refer to several of the same men and to a few of the same operations witnessed by myself. My narrative may therefore be to many of you as a tale that is twice told. My main object in going abroad was to see abdominal surgery, and the men I wanted most to see were Lawson Tait, Thornton and Bantock of England, and Schröder and Martin, the great lights of Berlin. On landing at Liverpool, I proceeded almost immediately to Birmingham, and for a few days became the guest of my friend Mr. Tait. Here I found letters informing me that if I wished to see Schröder and Martin I must lose no time in getting to Berlin, as these gentlemen cease operating and go for holidays early in

August. So, having ascertained that my friend would be at home and at work in August and September, I proceeded to London on my way to the continent—not, however, until I had seen three abdominal sections by Mr. Tait. To these I shall refer later. On reaching the metropolis, I found that the Samaritan Hospital would shortly be closed, as is the annual custom, for a few weeks. During the three or four days I spent in London I saw Dr. Bantock and Mr. Thornton each do one abdominal section. These two gentlemen, with Mr. Meredith, constitute the surgical staff of the little hospital in which so much has been done for abdominal surgery by Sir Spencer Wells and themselves. The building is a terrace house, to which a few years ago two storeys were added. The management hope in a short time to have a new building, in every way better suited to the important work of this most interesting institution. Dr. Bantock and Mr. Thornton work side by side, doing by far the greater part of the work, but their methods differ widely in this particular, that Dr. Bantock abstains entirely from the so-called Listerian precautions, while his colleague observes them all to the most minute detail, and still, to say the least, their results are equally good—a remarkable fact, to say no more of it. I had a letter of introduction from Mr. Tait to Dr. Bantock, and was received by him with very great kindness indeed. Of pleasant reminiscences of my late visit to Europe, one of the pleasantest is, perhaps, of some long conversations with that gentleman on, of course, the great gynæcological topics of the day.

Of the well nigh fifty abdominal sections I saw while abroad, it was my singular good fortune to see very few simple and uncomplicated. I had thus an opportunity of learning the methods of dealing with ugly complications employed by some of the most eminent abdominal surgeons in the world. The operation I saw Dr. Bantock do was an ovariotomy, the cyst being extensively adherent to the parietes and the whole of the fundus and posterior surface of the uterus, while it was of the intra-ligamentous variety, and attached to the whole floor of the pelvis. The assistant was Mr. Alban Doran, assistant surgeon to the hospital, and the author of the valuable little book on "Tumors of the Ovary, Fallopian Tube and Broad Ligament." No spray. Long abdominal incision. After tapping and separation of anterior and other adhesions, Dr. Bantock proceeded to incise the peritoneal investment of the cyst near its base, and to enucleate it. This was not so difficult a procedure as might have been expected. It left a very extensive oozing cavity composed of the whole floor of the pelvis. Adhesions to the uterus were so dense, and bled so freely, that the operator decided to treat it by hysterectomy. A Koeberlé's serrenœud was applied to the cervical portion, screwed up, and the uterus cut off. The stump was supported by two pins, made to transfix it and rest on the abdominal wall. The peritoneal cavity was washed out, the edges of the cavity whence the cyst was enucleated attached to the edges of the abdominal incision and a drainage-tube carried to its bottom, and after a most careful toilette of the peritoneum, the incision was closed by silk-worm gut sutures, the material Dr. Bantock always uses for this purpose. The most accurate coaptation was effected. This operation lasted two hours, and was beautifully and most carefully done. Dr. Bantock showed me his patient next day. She recovered perfectly.

Mr. Thornton's case was a pelvic abscess bursting into the vagina and leaving a fistula. He is a beautiful operator, careful, dexterous, giving great attention to details, and taking plenty of time. Listerian precautions throughout, including dense carbolic spray from a large apparatus. A long incision, careful and clever tucking up of the intestines with a large flat sponge. Right ovary and tube extensively adherent and filled with pus. Bursting of the abscess during separation of adhesions with the fingers. The pus horribly fœtid. Tube and ovary tied with silk and quickly removed. The stinking pus was mopped out with a sponge dipped in 1–1000 sublimate solution, by which the odor was quickly destroyed. The raw, pus-secreting surface was further dosed with a strong solution of iodine, and then again and again boiled water was poured into the abdominal cavity in large quantity till it returned perfectly clear and odorless. The water was carefully sponged out, and then a glass drainage-tube carried to the floor of the pelvis. Abdominal suture silk—a straight needle at either end. Vagina thoroughly washed out with sublimate solution. This patient made a perfect recovery. I was much struck with this operation, and it then seemed to me a model way of dealing with a difficult and dangerous class of cases.

The method of dressing the end of the drainage-tube employed by Bantock and Thornton is the same. It consists of a piece of rubber cloth with a button-hole slit, through which the tube is passed. The rubber cloth is then carefully folded over the absorbent dressings around the end of the tube.

I next proceeded to Berlin, where, in ten to twelve days, I saw eight laparotomies and four total vaginal extirpations of the uterus, besides a number of minor gynæcological operations by Schröder, Hofmeier, Gusserow and Martin. I wish here to remark upon the extensive additions to hospital and clinic accommodation in Berlin since my previous visit, ten years ago. In various parts of the city a number of magnificent new buildings rear their heads. One of the finest of these is the Universitäts Frauen-Klinik, presided over by Prof. Schröder, who is ably seconded by his assistants, Hofmeier and Reichel. Magnificent is, indeed, the only word that may adequately characterize Schröder's hospital. Everything that money can secure for the institution has been obtained. Herr Geheim-Rath Schröder (for he has recently attained to the rank of privy councillor), as an operator, impresses the spectator very much by his coolness and rapid and dexterous style. The hour is half-past seven in the morning, and with his invitation the visitor is enjoined to take a bath and change his clothing. One must be punctual, for Schröder, exactly at the hour, and attired in a white linen suit, walks along the corridor from the door which directly communicates with his dwelling, and enters the operating room. The visitors have previously entered. The door is now shut and locked. The patient is already under chloroform, the only anæsthetic I saw used in Berlin, and it was always given in the same manner. A wire frame, covered with a piece of flannel or similar material, is held over the mouth and nostrils, and the chloroform poured on from a dropping bottle. The most perfect silence in the room. The spectators, sometimes numbering seven, are ranged in a row at a little distance from the foot of the table. Contrary to general custom, Schröder stands on the left of the patient; on her right is his assistant, Hofmeier, Secundararzt to the hospital. No spray. The instruments lie in shallow glass dishes, covered with an antiseptic solution, within easy reach of the operator. The needles and ligatures are in charge of a nurse who stands near the head of the patient. Schröder uses a knife with a blade at least four inches long, and by a few rapid cuts from pubes to umbilicus upwards, opens the abdominal cavity. He then makes a rapid survey, searching for and separating anterior adhesions. No trocar is used, but the knife is plunged into the cyst, the woman being turned on her side while it empties, but no particular care is taken to prevent entrance of cyst fluid to the peritoneal cavity. The abdominal suture is made by curved steel needles, held by a needle holder. They are passed through the whole thickness of the abdominal wall, nearly an inch apart. A few superficial sutures are used, but no great care to carefully adjust the edges.

I saw Schröder do four ovariotomies, three of which were simple enough and soon over, but the fourth was evidently a malignant tumor, with numerous very vascular, parietal and pelvic adhesions—some to viscera. The bleeding points were tied where practicable, but as troublesome oozing from the pelvis continued, the vagina was tightly tamponed, while sponge pressure was being made from above in the pelvis. Abdominal suture was then rapidly completed, and compresses over the parietes with a firmly applied bandage—the whole a very different method to Lawson Tait's for similar complications.

Gusserow is the second professor of obstetrics in the University of Berlin—a quick, nervous, excitable, friendly little man, speaking English fairly well. His clinic is a fine new building, one of the departments of the great Charité Hospital. I saw him do two laparotomies—the first a so-called Tait's operation, but of which I am sure that distinguished surgeon would absolutely refuse the paternity. I arrived late and did not get a good view, but this much I did see—an enormous quantity of silk for ligature purposes left in the peritoneal cavity. The ligatures were all applied by transfixing the part with a curved needle in the bite of a needle holder, and the double thread was always tied. Whatever may be the capacities of German women in this respect, I am well convinced that no American woman could encyst, absorb, or otherwise dispose of the quantity of silk I saw left in that woman's peritoneum. She, however, was doing well next day and for at least a day or two later. The sponges, too, would horrify an English or American surgeon. The other operation was a simple ovariotomy.

Dr. August Martin, son of the late celebrated Eduard Martin, is a privat-docent in gynæcology in the University of Berlin. He is an enormous man, who receives his visitors with great courtesy and kindness. He has a private hospital with forty beds, and a large out-patient clinic. Here, every day in the week, some operations may be seen. The hospital is in charge of Frau Horn, a remarkable woman, who assists at all operations, and who, I am well convinced, could do an ovariotomy nearly as well as the master himself. I have seen her more than once, when one of the assistants was doing some minor operation, take the curette or other instrument from his hands and show him how, in her opinion, it ought to be used, an interference which, however, none of them seemed to resent. I saw Martin do two laparotomies and three total vaginal extirpations of the uterus. He is a rapid and most dexterous operator, although I cannot possibly approve of some of his methods. The abdominal sections here, as in the case of each of the other Berlin surgeons I have mentioned, are done in a room used for no other purpose. Spray before, but not during the operation· The hour, that which is most convenient; on one occasion half-past 8 a.m., the other at half-past 11. The table, a low, short, iron structure. The patient's legs hang over the table, and Dr. Martin sits between her thighs. The spectators are instructed to take a bath, and before being admitted to the room, each must take off his coat, waistcoat, collar and necktie, and suspenders. The operator is clad in a white linen suit, and wears rubber galoches. The latter precaution is soon seen to be necessary, as the floor of the room is swimming with solutions from the fingers, ovarian fluid, or whatever may happen to fall thereon. In all cases, however simple, the Berlin men make a long, slashing cut through the abdominal wall from umbilicus to the pubes, and to this rule Martin's method is no exception. The peritoneal cavity is open in a remarkably short space of time. The first operation I saw Martin do was a so-called Tait's operation. The first thing he did on getting in was to turn out all the intestines over the upper part of the abdomen, and immediately Frau Horn covered them with a warm carbolized towel slapped over them, a procedure which would make Lawson Tait fly in horror from the room. Extensive adhesion of ovaries and tubes. One was separated and ligatured ; the other so extensively adherent that it was let alone, the intestines returned, and abdominal suture applied. I did not gather the diagnosis in the second case, but on opening the peritoneal cavity general tuberculosis of that membrane was found, or what was supposed to be that condition was found, and after snipping off a small portion for microscopic examination, the abdomen was closed without any further interference.

Martin is a remarkably neat and rapid operator for total vaginal extirpation of the uterus for cancer. Scarcely a day passed without one or more operations on the cervix uteri for conditions which Emmet and his followers would call laceration and its consequences. It consists in a modified amputation of the cervix, in which the muscular tissue and diseased mucosa of the cervix are amputated, and the edges of the vaginal investment of the cervix are sutured to the edge of the incision on its inner surface. This amputation was almost always preceded by curetting the cavity, its irrigation to remove shreds, and the subsequent injection into the uterine cavity of a solution of persulphate of iron, the excess of which was always immediately removed by the stream from the irrigator.

On my return from the continent I proceeded to Brighton to attend the annual meeting of the British Medical Association. In the section for obstetrics, the principal subjects for discussion were, *The Alternatives of Craniotomy*, *The Treatment of Extra-uterine Fœtation*, and *The Removal of the Uterine Appendages*. the most eminent authorities in Britain and some very prominent Americans taking part. A week later, on the 16th of August, I again reached Lawson Tait, and remained with him for a month. During this period I saw an immense amount of work, chiefly, of course, in abdominal surgery. I believe I am correct when I say that he does by a very long way more abdominal sections than any other man. For rapidity, dexterity, coolness and readiness for any emergency, however trying, he is simply marvellous, and to these qualities, as well as to his indomitable energy and extraordinary physique, are due his success. On Tuesday, the 17th August, I saw him do four abdominal sections, two vesico-vaginal fistulæ and one perineorraphy ; and during the next four days he did at least ten other laparotomies for various conditions. I do not know the annual number of cases done by Mr. Tait, but it must considerably exceed an average of one for each working day. During three weeks I had the honor and advantage of assisting him with all his operations, but Mr. Tait's wonderfully nimble fingers leave little to do for his assistant under any circumstances. Indeed the great secret of success in his assistant is in knowing how little he must do and in abstaining from doing everything else. Mr. Tait's operations are for the most part done in his private hospital, which adjoins his dwelling in The Crescent, a short, quiet street in the centre of smoky Birmingham, and in the Birmingham and Midland Hospital at Sparkhill, a suburb of the town. It is probably known to most of the members of this Society that some authorities, notably Emmet of New York, credit Mr. Tait's phenomenal results to this very smoke of Birmingham, but he is much amused at the idea. He avoids, if he can, operating anywhere else, and then only if he can secure for the patient a nurse trained by himself. The majority of the cases are done at nine in the morning, but occasionally, when there is press of work, he also operates between two and three in the afternoon. The anæsthetic is a mixture of chloroform one part and ether two parts by measure. Heat is evolved when this mixture is made, implying, I suppose, some chemical combination. It is given by Clover's inhaler, which secures economy of the drugs and comparative purity of the air of the room—a great advantage to operator and his assistants. Mr. Tait believes this combination to be the safest he has tried, and has had an experience of it in 1500 cases without a death and without any *contretemps* worthy the name ; and he told me he had had deaths from every other anæsthetic he had used. He insists on perfect silence during its administration. This is managed by Dr. Annie Clarke, his only paid assistant. All operations are done in the room the patient is to occupy. The table consists of a board eighteen or twenty inches wide, and about five feet long, which rests on two trestles. The head of the table is about three inches higher than the foot. In this, as in every appointment of his hospital and detail of his operations, simplicity is the most striking feature. So far as I know, no conditions are exacted of spectators invited to be present at operations. Both arms and legs of the patient are strapped to the table. Mr. Tait stands on the right of the patient, and his assistant on the left. At his right hand is a small table with the most necessary instruments immersed in plain water. Absolutely no antiseptic is used for any purpose whatever. I never saw or smelt either carbolic acid or sublimate, or any other solution of the kind during the five weeks I spent with him. Two basins of warm water rest on chairs, one at either hand of the operator. That on the right is for the sponges; that on the left to rinse the hands when necessary. A calico bag containing the carefully-prepared sponges hangs within easy reach of the right hand. Mr. Tait prepares for the operation by taking off his coat, putting on a rubber apron, and washing his hands and arms with terebene soap, without a nail-brush, which I never saw at any of his operations. Everything being ready, he takes half-a-dozen sponges from the bag and drops them in the basin for the purpose. He then takes up a case of scalpels which rests on the window and selects one, trying it on his thumb. The knives Mr. Tait uses are small ones, seldom more than an inch in length. The incision is then made, and one of the most remarkable things about his methods is the incredibly short incisions through which he does his many remarkable feats of operating. For removing the appendages, even if densely adherent, 1 inch to 1½ is the rule, and that applies to the cut in the superficial tissues. The peritoneum is incised only to an extent permitting his left index to enter; after this is crowded in the middle finger, with which the ovary and tube are separated from adhesions if necessary, grasped, and fished out through the abdominal incision to be ligatured. Such an operation, even when there are adhesions, is usually complete, including the abdominal suture and dressing, in from nine to fifteen minutes, and so, in proportion, are other operations done with the same marvellous rapidity. Mr. Tait succeeds in removing adherent multilocular cystomata through wonderfully short incisions by getting his fingers in through the anterior large cyst after it has been tapped and opened, and breaking up the solid matter and small dense-walled cysts. One of the strong statements so characteristic of the man is that no laparotomy ought ever to take more than an hour, and he who thus consumes more time doesn't understand his business. It was my fortune to see him do scarcely anything that could be called simple, except a few of the removals of appendages, but I was told by a number of Americans who saw him do a simple ovariotomy for a unilocular cyst, that it was all over in exactly five minutes.

Mr. Tait uses the drainage-tube very often, and also very often washes out the peritoneum. He does not wait, as those who have seen Keith say he does, to tie or otherwise arrest every bleeding point, but if the oozing is inconsiderable, and sometimes even when it seemed to me considerable, he puts in a drainage-tube to the bottom of the Douglas pouch, and closes the wound, the accumulation in the tube being removed from time to time by a rubber ball and glass sucker, with a piece of rubber tubing at its end, which is made to dip to the bottom of the tube. During the operation he controls oozing surfaces by the pressure of sponges. If this is insufficient to stay the bleeding, he uses the cautery, or, as it seemed to me, oftener the perchloride of iron. A lump of the salt is dissolved in a few ounces of water and applied lightly to the part with a sponge, or a piece of the salt is grasped with forceps and pressed on the bleeding point. This applies to bleeding that cannot easily be reached by silk ligature, and he never uses catgut or any other. For washing out he uses plain water, which may have been boiled, but which many times I have seen him cool sufficiently by the addition of cold water as it came from the tap. All washing out cases are also treated by the drainage-tube, through which the remains of the water are sucked out, as they subside to the most dependent part, as well as by sponging. One of the great advantages of the drainage-tube claimed by Tait is that, besides its rendering possible and easy the removal of blood and bloody serum, it enables him at once to see if the bleeding is serious, and to take measures to arrest it without taking out the tube or opening up the wound, and, in a number of such, the method has been to inject through the tube a watery solution of perchloride of iron, a procedure he has found perfectly successful. Silk is the material for the abdominal sutures, and it is passed through all the structures, muscle included, by a triangular needle threaded with a very long piece, which is passed continuously, leaving long loops, which are then cut, and so make the ordinary interrupted sutures. No superficial sutures are ever used, and certainly no extraordinary care taken to secure accurate coaptation of the edges. The dressing always consists of pads of gauze filled with plain absorbent cotton, held on by loosely applied strips of adhesive plaster, and over all a cotton bandage. It must not be supposed that doing, as I have many times seen him do, the most difficult and complicated things in an incredibly short space of time he gives the impression of haste or hurry, or that anything is left undone or done in a perfunctory manner.

Of the many interesting things I saw Mr. Tait do, I can briefly relate to-night only a few. One of the first cases was that of a lady from America, who presented the symptom of passing fœcal matter from the uterus. She was unmarried and past the menopause. Some solid masses could be felt in the pelvis. He did not bother much thinking what it might be, but cut in to see, when he found a multinodular myoma. He immediately concluded that the source of the trouble was a nodule which had become adherent to intestine and breaking down by a process of suppuration or necrosis had discharged into both uterus and intestine. He treated the case by hysterectomy, and cured her. I saw her five weeks afterwards, just before she left for home, and she was quite well. And while on the subject of hysterectomy, I saw two others, both treated extra-peritoneally by the Koeberlé serrenœud, the method Mr. Tait always adopts. He has also tried the intra-peritoneal method, but found it unreliable in controlling bleeding, and so, after losing some cases, he has gone back to the old method. After one of these operations, he told me that it made about the twentieth successive successful case of hysterectomy treated in this way. Both of these got well.

Sarcoma of the Kidney.—This was a large tumor distending the abdomen, with an indistinct fluctuation-like sensation, extending to and felt in the pelvis. It had been diagnosed as ovarian, and Mr. Tait had agreed in this. It was a tremendously bloody operation to shell this vascular growth of the size of a foot-ball from its capsule, and it gave my friend a fine opportunity for the display of his coolness and fertility of resource. I saw the patient occasionally for two or three weeks after, slowly recovering from a terribly grave operation, to die, I suppose, later from recurrence of the growth.

Burst Ovarian Tumor.—Of these I saw three or four. One was a colloid cyst, and the jelly-like contents filled the peritoneum, sticking to everything. It appeared to be malignant, and had extensive pelvic as well as other adhesions, which bled freely. This patient died in 24 hours, the only death during all the time I was with Tait, except a cholecystotomy, to be mentioned later. These burst cyst cases were all treated by washing out and the drainage-tube.

Laparotomy in a Puerperal Fever Case.—The patient, a lady (primipara) living at Wolverhampton, had a very difficult labor, and soon after developed symptoms of inflammation; severe pain, fever, incessant vomiting, exceedingly rapid and feeble pulse, and every evidence of impending death. About the seventh day, at her physician's request, Mr. Tait, with myself as assistant, went to Wolverhampton, some 20 miles from Birmingham, to see her. It was decided to open the abdomen. This was done by a two-inch incision, through which Mr. Tait got in his left index and middle finger. He found an encysted collection of horribly stinking bloody fluid to the left, and behind the uterus. This he burst with his finger, and sponged out, placing a drainage-tube in the bottom of the cavity. No washing out, although this had been contemplated. The patient was left, with intructions to her medical man that absolutely nothing should be given by mouth, and that turpentine and soap-suds enemata be administered per rectum. The pulse improved within half an hour, the vomiting never recurred, and the patient made a continuous and rapid recovery.

Two days later, in company with Mr. Tait and Dr. James R. Chadwick of Boston, I saw Dr. Savage, Mr. Tait's colleague at the Birmingham and Midland Hospital for Women, do the same operation in a similar case. The patient was the wife of a physician of Birmingham, and had been confined a week before, and presented much the same set of symptoms as described in the previous case. Here, however, a large quantity of sero-purulent fluid escaped as soon as the peritoneum was opened. It was thoroughly and carefully washed out, and a drainage-tube inserted. The patient, however, died five or six days afterwards.

I cannot describe to you how full of interest these cases were to me, opening up, as they did, a new field for abdominal section. Mr. Tait told me that he had done already three or four such cases, saving half of them.

Cholecystotomy.—Of this operation, of which my friend is practically the originator, and has in Europe the field nearly all to himself, it was my good fortune to see two. The first was that of a very fat, deeply-jaundiced woman, with a skin presenting abundant evidence of the intense itching she had suffered. A diffuse, indistinct, fluctuating swelling could be felt in the region of the gall-bladder. An incision two or three inches long, running obliquely downwards and outwards, commencing a little above the lower edges of the ribs and extending two or three inches lower over the swelling, was made. On opening the peritoneum, the enormously distended gall-bladder was at once seen. It was tapped with a curved trocar, and 40 ounces of thick, dark green bile let out. The opening made by the trocar was then extended, and with forceps and scoop ten gall-stones were extracted. The edges of the opening in the gall-bladder were sewed to the edges of the abdominal wound, and a large rubber drainage-tube inserted. This patient died a few days afterwards, and at the autopsy cancer of the liver was found. The second was a case in which Mr. Tait was averse to operating, believing the evidence of cancer to be very strong. Ultimately, however, he decided to give her the benefit of exploration. The gall-bladder was found distended with half a pint of pus, and containing one good-sized gall-stone, but no evidences of cancer. I cannot speak of the ultimate fate of this case, as it occurred only a day or two before I left Birmingham.

Of Mr. Tait's remarkable success in abdominal surgery I can speak from personal knowledge, as by his kindness I had an opportunity of seeing repeatedly the most unfavorable cases till they were convalescent.

The after-treatment adopted by so successful a surgeon must be to all concerned as a most interesting matter. For 36 hours Mr. Tait allows absolutely nothing, not even water, by mouth. No morphia or any preparation of opium is ever given, except to ease a dying patient out of the world. As soon as any symptoms of peritonitis appear, such as pain, distension, vomiting, rise of pulse or temperature, seidlitz powders by mouth and soapsuds and turpentine enemata are given at intervals, till flatus passes and the bowels act.

My own impressions as to the reasons of Mr. Tait's remarkable success are that it cannot be credited to any single circumstance, but to the whole of his methods, which present such abundant evidence of the influence of so vast and unparalleled an amount of experience.

ABSTRACT OF A PAPER ON THE IMPORTANCE OF ALIMENTATION AND SANITATION IN SICKNESS.

By J. Earle Jenner, M.D., L.R.C.P.L., of Picton, Ont.

(*Read before the Canadian Medical Association, at Quebec, August,* 1886.)

In dealing with this subject, you will pardon me if I seem to leave my text and wander in the domain of health, as I find it difficult—if, indeed, it be wise to do so—to lay down one set of rules to live by when in health and another set of rules totally different to live by when sick. As disease is often the result merely of a departure from the laws of health, its treatment will reduce itself simply to a return to those laws. It is upon the supply of a proper quantity and quality of food that the health of mankind largely depends. One writer has said that the comfort, energy, usefulness and moral character of a man depends largely on his digestion, and as his digestion depends largely upon the kind and quality of food he takes, as well as the time he takes it and the condition of his nervous system during the ingestion, it becomes of vital importance to the individual to know the details of his dietary and regimen.

The experience of every nation bears testimony to the baneful effects of improper feeding on the health of large bodies of men, and the death returns of every year show the evil effects of dietetic errors in feeding young children. Liebig says that improper feeding is the cause of most of the infantile diseases and more than half the deaths during the first year of life. Upon the feeding and housing of the child for the first ten years of its life will depend largely its physical and mental capacity; and its moral tenor will not be uninfluenced thereby. The importance of food, therefore, in its relation to health as well as to sickness, becomes of prime importance. The farmer knows that if he is to produce the best animal for the market it must not only be well bred but well fed, especially during the period of growth and development. The trackman understands the importance of weighing his oats and stripping the hay of all chaff and rubbish when training his horse for a severe contest. Stock raisers have long since learnt the absolute necessity of paying strict attention to matters of detail in rearing their animals, to have their enclosures large, light, airy and clean, free from all ammoniacal and other noxious odors, of having plenty of clean, well cured fodder, a clean bed, and a good supply of pure water. It is generally said a pig will thrive in dirt, but let a well-bred pig choose his habitation, and he will, in point of cleanliness, put to shame many of us who accuse him of filthy habits. What is true of one animal is true of all; learn what is the natural food for that animal, then give it in proper quantity, of the best quality, well prepared and at regular intervals, and the question of feeding is largely answered. The kind of food as well as the quantity thereof necessarily varies with the environment of the individual. Man, unlike all other animals, possesses the faculty of accommodating himself to his surroundings, otherwise his distribution over the earth's surface must necessarily have been very limited. This applies to his dietary as to his habits generally, and though to some extent the disastrous effects of dietetic errors may be compensated for by an effort on nature's part to establish a tolerance for these foreign substances, she invariably murmurs at the abuse, and will as invariably wreak her vengeance if not appeased by a timely retribution on the part of the offender. I believe that in ninety-nine cases out of every hundred the seeds of a disordered digestion are sown during the first few years of life. If the child escape in the first year, the evils resulting from irregular and unnatural feeding—*e.g.*, giving it the breast or bottle every five minutes to keep it quiet and feeding it on rolled biscuit and such stuff as is the common practice—it will within a year or two experience the remorse of a guilty stomach for having partaken of dried beef, pickles and pastry, not to mention the numerous articles of diet admissible when properly prepared, but so universally made indigestible by bad cooking. Instead of adopting the prayer of Solomon, to be fed with food convenient for them, a large class of people go the very opposite road and fill their maws with all sorts of offal, absolutely interdicting pure cold water, banishing light and fresh air from their apartments, and shunning a draught as though it bore on its wings the messengers of death.

The difficulty I have found in treating many of my patients is not to get them to take medicines. They will swallow literally gallons of nauseous draughts prepared by themselves or their friends, and all the pills and potions I see fit to prescribe, but they will not, either through ignorance of the importance of such measures, or through superstitious fear of evil resulting therefrom, admit fresh air and sunlight into their dwellings and take into their stomachs a proper amount of fitly prepared nutritious food.

The poet has truthfully said as soon as we begin to live we begin to die ; the first breath of the infant kindles a flame in its tenement of clay that continues to burn until the structure is consumed. At once this process of destruction commences and goes on simultaneously with that of building up or reconstruction, never ceasing, night or day, until the end comes, when the vital powers, no longer able to repair the breach, succumb to their fate and the body returns to its mother earth. During this period of growth and development in a healthy individual, this *reconstructive* process is in excess of decay; and notwithstanding the constant wear and tear of the entire organism, the creature grows, develops, and apparently knows nothing of physiological waste. In this fact doubtless lies the key to the most potent prophylactic means that can be brought to bear in treating diseases.

Just in proportion to the amount of proper food, water, air and sunlight, with exercise, that the creature receives, will it grow, develop, and be enabled to resist disease and decay. This law which applies in health holds doubly good in sickness. Then the functions of the various organs are either over active, and thus waste is in excess of repair, or they fail in part or wholly to perform their task, and effete material accumulating in the system interferes with the proper absorption and assimilation of nutriment. In either case the phenomena of starvation obtain. While pursuing my post-graduate course in London I frequently visited the Children's Hospitals at Shadwell and Great Ormond street, where I had abundant opportunity of studying the effects of starvation on little children. It is a noted fact that of all children under one year old brought into the London hospitals, a large percentage are cases of systematic and deliberate starvation by their inhuman mothers that at their death they may recover the £2 insurance on their little lives.

The importance of proper feeding at this period of life cannot be over-estimated. The babe deprived of its natural source of nourishment either from physiological incapacity on the part of its mother, or from positive refusal on her part to perform toward her offspring the duties of a mother, too often sickens and dies from pure malnutrition. It loses, or, perhaps, never acquires, that plumpness that so beautifully rounds and shapes the tiny form of a healthy infant; the skin, void of that soft elasticity characteristic of babyhood, is dry and harsh, and hangs in folds from its attenuated limbs; its face, pale, pinched and wrinkled, wears an anxious, careworn expression; and its voice is but a feeble wail, resembling the cry of sick kittens. The entire picture is one of premature old age. Give these children carefully selected and properly prepared pancreatised food, or, what is better, a good wet nurse, and behold the change. Gradually, almost suddenly, the wrinkles disappear from the little face, the limbs grow plump and firm, the feeble cry has developed into a lusty crow, its sleep, which was irregular, nervous and interrupted, becomes sound, peaceful and natural, from which the little one wakens smiling, evidently refreshed and invigorated. We can scarcely believe, as we contemplate the change, that all this manifestation of life and health exists in the miserable, helpless, dying weakling of a few days ago ; but such transformation scenes are of daily occurrence in children's hospitals. If withholding food from a strong, healthy child can so soon bring it to such a condition of beggary, how much more deleterious must its effects be on one consumed by fever, depleted by loss of blood, or wasted by chronic albuminous discharge or prolonged suppuration. An eminent authority has said concerning the consumptive person, " If his stomach go back on him, the outlook is gloomy in the extreme." I always feel that my sheet anchor is out when my patient takes freely of nourishment.

The babe that has sickened as the result of improper feeding requires little treatment other than relieving the alimentary canal of any undigested food it may contain and being put on a well constructed regimen. The child should be fed solely at the breast for the first six months at regular intervals of two hours, then for two months longer at intervals of two and a half hours, when farinaceous foods should be gradually added, and at ten months the child should be weaned and fed on milk and farinaceous food until the second year, when meat may enter into the dietary. If the weaning time come in the hot season, better not wean until the fall.

Children should not be brought to the table with adults, no matter how well regulated the household may be. To refuse a child anything it wants during a meal is to so disturb the even balance that should exist between mind and body for the proper performance of functional work as to interrupt or stop altogether the process of digestion ; hence it is of prime importance that nothing inadmissible for the child be put before it during mealtimes or while the process of digestion is actively going on.

I have used largely, in treating young children and adults suffering from malnutrition and various wasting disorders, Reed and Carnrick's peptonized cod-liver oil with milk, given in sherry wine, and combined with syrup of the iodide of iron where I find glandular enlargement with or without suppuration. This, with out-door life and an abundance of milk, has seemed like the "elixir vitæ" to many of my patients.

Often, where I have found cod-liver oil disagree, I have seen most flattering results from a decoction of mullein leaves in milk. Three ounces of the green leaves to a pint of milk, boil, and let stand an hour, then strain through muslin, and sweeten. Drink when hot; may be taken *ad libitum.* This will often check the night cough of phthisis, and many patients thrive and grow fat while taking it.

For the summer diarrhœa of children, I have had good results from the use of Benger's liquor pancreaticus. I rarely find it necessary to do more than correct the stools with gray powder and oil. Keep the child quiet and cool, and give it nothing but pancreatised milk. The vomiting ceases, flatulence disappears, and the stools become natural. In most cases of non-inflammatory diarrhœa this will be sufficient to work a speedy cure. Pancreatized gruels may be substituted when the child will not take milk. Always give plenty of pure water. I have always found, too, when raw milk does not agree with adults, if pancreatized, it will sit lightly on the stomach, will not be followed by flatulence, but by a feeling of comfort.

Doubtless more than half the disease we have to treat, and very much more of misery and disorder that escapes our notice entirely, is the result of a disregard of nature's laws. Of all the causes of disease, heredity is, perhaps, the only one that can never be avoided during life. Before the child is born its constitution is already framed, and during its lifetime can only be strengthened and supported in weak places, but not remodelled. It can, however, be so built up and invigorated by carefully avoiding all deleterious influences, as insufficient and bad food, unsanitary surroundings, and exposure to severe weather, and by supplying the needful inorganic elements for a robust constitution, that what was in its conception a defective, tottering framework may become a solid, substantial structure, capable of resisting the storms of an average lifetime.

Impure air, which fills so many of our houses and public buildings, forms an eligible medium for parasites and disease germs. Impure water and milk form the most prolific source of many diseases, especially the zymotic diseases. The organic impurities contained therein produce diarrhœa, specific fevers, and parasitic affections. Sewer air is another very prolific source of disease in towns and cities, producing throat disease, diarrhœa, diphtheria and typhoid fever. More than half the houses of our common cities and towns are capable of producing disease.

Now that sanitary science and hygiene are being taught in the public schools, we may look forward to a better observance of the laws of health by the rising and future generations, but the matter of educating the people in rules of right living should not be left solely to the school teacher. His knowledge is not always as perfect in this department as desirable, and his efforts should always be supplemented by the physician when about his professional work. The physician should feel himself the responsible guardian of the public health, and not consider it beneath his calling or too much trouble to give instructions in hygiene and sanitary science whenever opportunity presents. If he be wide-awake to his own interests he will not neglect this part of duty, as he will soon begin to reap the benefits of his labor thus spent in the good results of such training. Often hygienic instruction should take precedence of a prescription for drugs, although it may not be deemed worth so much in money by the patient. If every doctor should make it a point to lay down certain rules for the instruction of nurses and attendants upon the sick room, and for the guidance of mothers in rearing their children, and *insist* on the great importance of carrying them out in detail, only a few years would elapse before intelligence in these matters would be universal where now ignorance and superstition are so prevalent. I have known eminent English physicians and accoucheurs to have printed rules for the guidance of mothers and nurses, a copy of which they leave at each house when called professionally. This may savor of quackery, but I hold that any means calculated to educate the people in sanitary, hygienic and prophylactic medicine is admissible, and should receive the sanction of all regular practitioners.

It is a deplorable fact that this duty of educating the people in rules of right living has been sadly neglected by the profession. It cannot be otherwise, or ignorance in this matter would not be so prevalent. A great deal of the error to which I have referred is traceable to the doors of the profession, either through ignorance, carelessness or a dishonorable desire to ingratiate one's-self with the family by assenting to the whims and superstitions of the age. These notions are confirmed, approved and sanctioned by the attending physician, instead of being branded as infamous and dangerous to the public welfare. To root out this evil often calls for more tact and skill on the part of the physician than to successfully combat the disease which he is called to treat. To question the propriety of certain domestic remedies, and interdict certain time-honored customs and sayings, is to cross swords with the household and perhaps lose the confidence of the family forever. An instance which occurred in my own experience about a year ago illustrates this fact. I was called to attend a woman in labor, a primipara. She inherited phthisis, and I found tubercular deposits in the apices of the lungs. She lived in a large brick farm-house, with plenty of commodious, airy and well-ventilated rooms, but religiously shunning these, chose for her lying-in chamber a room such as I never saw before or since in any dwelling. It was an inner room, surrounded on all sides by other rooms, with neither window, skylight, nor transom, not even a stove-pipe hole in the ceiling nor a rat-hole in the floor. The rats had evidently concluded it wasn't the best room for them. The only opening in the walls was a door, and that was less than the regulation width. I advised her to take another room, but she thought she would get on all right. I told her friends of the danger of leaving her boxed up in that pen, and of the necessity of pure air and sunlight for her, but they remonstrated and replied, Mrs. So-and-So was confined in that room, and she did all right, and that Dr. B. said it was just the room for the occasion, the best in the house. I may here say that Mrs. So-and-So was at that time in Denver City, Colorado, whither she had gone two years subsequent to her confinement on account of lung trouble, which proved to be phthisis. I cannot say where Dr. B. went to ; he died soon after. I need scarcely tell you my patient did not do well. The lochia became fœtid, chills and fever supervened, and dyspnœa at last drove my patient to seek a more abundant and purer supply of air. After transferring her to a large, airy, well-lighted room, under the curse of some neighbor woman who predicted her certain death in nine days because she was carried through a doorway, I depended entirely on this change to work her recovery. The improvement was as steady as the change was sudden. The dyspnœa ceased at once, the appetite returned, fœtor disappeared, and in two weeks she was on her feet, though I urged her to keep to her couch a fortnight longer.

The importance of dietetics in the treatment of all diseases is being recognized more and more every day as not second in importance to medicinal treatment. Since Mayer of Germany, in 1842, first established his doctrine of the conservation of energy, and traced every manifestation of life and active or physical force, whether within the living organism or in a mere machine, back to the sun, the essential elements of life, fuel and oxygen, have gradually and of later years rapidly gained ground in their important relation to the animal economy. Still, much room is left in our system of medical education to improve the teaching of dietetic medicine. Instead of making the matter of feeding the sick a side issue in the course of lectures in our schools, and merely casual reference to the question of nourishment in the sick room, it should be given a place in the course of didactic lectures equally important to physiology or theoretical medicine, and special attention directed to alimentation at each bedside clinic.

I am not aware that systematic teaching of dietetics is pursued in any of our Canadian or American schools, nor do I know that a chair for this purpose is established in any of the British or continental schools, but I observed that particular pains was taken by the London professors to impress on the students at their bedside clinics the all important item of nourishment in the treatment of disease.

The average Canadian student is left to acquire his knowledge of dietetics during the first few years of his practice. Happy is he, and still happier his patients, if he has had the benefit of a good office experience. Without having had the importance of dietetics impressed on his mind, and the precarious nature of the appetite and the idiosyncrasies of individuals pointed out to him, he will either neglect this factor of alimentation altogether or make his own stomach a model by which he regulates the dietary of all his patients, forgetting that what is one man's meat is another's poison.

I have often thought that a manual of dietetics, written or compiled by some competent authority as Dr. Roberts of Manchester, or J. Milner Fothergill, M.D., London, should be in the hands of every practitioner, introduced as a text-book into every medical school and, as far as possible, into the homes, to take the place of such abominations as "The Home Physician," "Every Man his own Doctor," etc., to which, I am sorry to say, many of the fraternity give their testimony.

To enumerate the various prepared foods and aids to digestion in the market would fill a chapter as long as the catalogue of the ships in the Iliad. My object is to urge the importance of systematic and vigorous alimentation in sickness, and direct attention to the duty of physicians in inculcating principles of right living among the people generally. I am convinced that feeding should receive the first consideration in treating acute diseases, and drugs be resorted to as mere adjuncts, but very necessary adjuncts at times. Certain symptoms will always and forever require the use of certain drugs, and a few specific remedies, as quinine in malarial fever, iodide of potash in syphilis, etc., will, perhaps, never lose their usefulness; but certain it is that the wholesale and indiscriminate use of many drugs is fast coming into disfavor, and although we are not ready yet to dispense with drugs altogether, I believe the time will soon come when the treatment of disease will resolve itself largely into a system of hygienic rules, when fresh air, sunlight, good food, pure water, and exercise either by the patient himself or by the vicarious system of massage, which is doing such wonders in the ranks of the neurasthenics, will reign to the almost absolute exclusion of drugs.

THE TREATMENT OF LARYNGEAL TUBERCULOSIS BY SUB-MUCOUS INJECTION OF LACTIC ACID.

By George W. Major, B.A., M.D., &c.,

Late Clinical Assistant, Hospital for Diseases of the Throat and Chest, London, Eng.; Fellow of the American Laryngological Association: Specialist to the Department for Diseases of the Nose and Throat, Montreal General Hospital; and Instructor in Laryngology and Diseases of the Throat, McGill University, Montreal.

(*Read before the Medico-Chirurgical Society of Montreal.*)

The introduction of lactic acid as a local remedy in tuberculous disease of the larynx has opened up a new era in the treatment of this troublesome affection.

The discriminating action of lactic acid when in contact with healthy and diseased tissues, as pointed out by A. von Mosetig-Moorhof, was utilized by Krause, who foresaw in the analogy between lupus and tuberculosis as great a possible future for this solvent in laryngeal tuberculosis as Mosetig-Moorhof had found in lupus.

On October 14th, 1885, at a meeting of the Berlin Medical Society,* Krause communicated the results of the use of lactic acid in fourteen cases of laryngeal phthisis. He there made a number of demonstrations, and exhibited several preparations of the larynx secured at the autopsy of a patient who had undergone treatment. The result was considered exceptional. Virchow, amongst others, bore testimony to the presence of cicatrization in the specimens, and acknowledged the possibility of curing tuberculous ulceration of the larynx.

These conclusions have since been fully confirmed by several independent observers, as, for instance, E. Jellinek (Vienna),† J. Gottstein (Breslau), A. Rosenberg (Berlin), W. Lublinski (Berlin), and Theodore Hering of Warsaw.‡

Last winter I treated privately and at my klinik for diseases of the nose and throat, Montreal General Hospital, a number of cases of tuberculous infiltration of the larynx with lactic acid of varying percentages, applied by means of atomizers, brushes, sponges or absorbent cotton. Employed in this way its action was very satisfactory, checking ulceration and promoting cicatrization. In a case of tuberculous ulceration of the pillars of the fauces it worked almost miraculously; ulcerations healed that had obstinately refused to yield to a variety of other measures.

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* Berliner Klinische Wochenschrift, No. 29, 1885.

† Wiener Med, Professoren-Collegium, Sitzung von 9 November, 1885.

‡ Société Française d'Otologie et de Laryngologie, session d'Avril 1886.

It is not, however, of lactic acid used as a superficial application to the laryngeal mucous membrane that I am desirous of speaking, it is rather of it as a *submucous injection* into the substance of the laryngeal soft tissues when the seat of tuberculous infiltration.

During the past summer I saw in Krause's private klinik (Berlin) a number of cases undergoing treatment by injection, and had ample opportunity of observing the results achieved in many of them. The instrument employed is on the principle of the hypodermic syringe, larger, longer, and suitably curved for entering the larynx by the natural passages, and was originally designed by Dr. Theodore Hering of the throat klinik at St. Roch's Hospital, Warsaw. From 5 to 10 minims or upwards may be injected at each sitting, and the strength of the solution may vary from 20 per cent. to 80 per cent. This treatment may be employed at any period of the disease, and is especially efficacious in the early stage, that of œdema and club-shaped swelling of the arytenoid bodies.

For the sake of brevity and perspicuity, I shall refer to the history of the case of the gentleman whose larynx you all have had the opportunity of examining this evening.

Mr. James T. T., aged 34 years, of Gaspé, came under my care on the 7th of September. He reports his family history as free from any phthisical tendencies. In November, 1885, he slept between damp sheets, and his illness dates from that time. On laryngoscopic examination I noted characteristic swelling of both arytenoid bodies, interspace and ary-epiglottic folds, deposit in both ventricular bands slightly ulcerating on the surface, post-laryngeal papillomata, one of the surest signs of tubercular deposit in the posterior laryngeal wall,* and a partial prolapse of the right sacculus laryngis. There was also loss of voice, and deglutition was painful,—a most typical case of phthisis laryngea. An examination of the chest developed the fact of deposit in the right lung. The left side of the larynx was first acted upon, by way of experiment, and was injected on September 11th and every second or third day thereafter for eleven sittings, when, in size, as you may have observed, it nearly approaches normal proportions. The right side was then treated, and has already undergone seven injections, with, as you have seen, very good and satisfactory results. The patient now suffers no pain or inconvenience in swallowing, is much improved in voice, and his breathing is not embarrassed. The physical condition has also been benefited *pari passu*. Internally, I administered thrice daily one grain each of phosphate of lime and soda. He complained of but little pain of short duration after each operation, which was seemingly lessened at each subsequent procedure.

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* Author's communication, *vide* Transactions of the Fifth Annual Congress of the American Laryngological Association, New York, 1883.

Should a slough form, as sometimes happens, at the point of entrance of the needle, the active treatment must be temporarily suspended, but recourse may be had meanwhile to a weaker solution of the acid in the form of a spray applied to the surface of the larynx. The slough, on separating, leaves a healthy, granulating surface, which will heal completely in a few days. I have found spasmodic closure of the glottis very likely to occur after the use of a strong solution of lactic acid, especially when the brush, sponge or cotton holder has been the medium of application. When used by atomization, a much stronger percentage of acid can be borne without this danger. This difficulty I have not observed in the process of submucous injection.

I employ an acid of the average strength of 20 per cent., but it is well to commence with a weaker solution and to gradually increase the percentage at each sitting, and the average quantity used for each injection has been from 6 to 10 minims.

For obvious reasons, care should be taken to bury the point of the needle sufficiently deeply in the laryngeal substance to prevent the escape of the acid externally to the puncture. In the case of a tuberculous deposit assuming the proportions of a tumor or nodule, the needle should be entered in the centre of it and the mass freely injected. Lactic acid itself in a more dilute form may be used as a pigment or spray in the intervals between the injections, or, if desirable, at the same sitting.

The treatment by lactic acid injection need not preclude the use of many other and valuable methods of local cure—sedative, anodyne, antiseptic, alterative or astringent. There is no objection to the use of cocaïne to render the parts more tolerant; so far I have not, however, found it necessary.

The strongest argument in favor of this treatment is to be found in the fact that the disease in the larynx may be cut short in its early stage of development or before erosions and ulcerations have had time to occur. No former line of treatment (if we except, occasionally perhaps, astringents) has ever been equal to the accomplishment of this end, and in this particular point I regard it as of inestimable value.

In speaking so highly of the plan under consideration, I particularly wish it to be understood that I do not seek to overestimate the value of local treatment to the disparagement or neglect of constitutional remedies; on the contrary, I regard systemic means as of very great and paramount importance.

Before concluding these remarks, I must here briefly refer to three points intimately connected with laryngeal phthisis, concerning which misgivings apparently exist in the minds of some members of our profession.

Primary laryngeal tuberculosis, or, in other words, laryngeal phthisis, uncomplicated with lung deposit, is seldom encountered. Several very eminent and conscientious observers, however, maintain that they have met with such cases (J. Solis-Cohen, B. Fränkel, of Berlin, and Rossbach of Jena); on the other hand, many equally celebrated authorities as Morell Mackenzie, Voltolini and the late Professor Krishaber have either absolutely denied, or have been at least doubtful of its existence. When it happens, it will most probably be found, I think, in persons hereditarily free from tuberculous tendencies, and in whom the disease has been induced by external causes. In many cases of laryngeal phthisis the local manifestation may be far advanced in the larynx before any pulmonary trouble can be detected. This is not, however, absolute proof of secondary lung tuberculosis. This mooted question can alone be finally determined in any given instance by an examination after the death of the patient by accident or by some intercurrent and acute disease in which pulmonary complications do not play a part. Such a combination of circumstances are not likely often to happen, hence the difficulty experienced in arriving at any definite conclusion.

Is the condition described as phthisis laryngea a true tuberculosis of that organ? Schnitzler finds the cause of the disease to be a chronic inflammation of the mucous membrane, and the ulcerations to be due to follicular tumefaction, while Max Schottelius claims that the condition is caused by the corrosive action of the sputa on the laryngeal mucous membrane. These two views, I may say, meet with but little favor.

Rheiner, Rokitansky and Virchow insisted over twenty years ago on the actual presence of tubercle in the larynx. We are indebted to the researches of Wendt, Heinze and Isambert for recent advances in the pathological knowledge of tuberculosis, as affecting the larynx and pharynx. They have settled the fact that tubercle does exist in these regions, and undergoes similar changes there as elsewhere.

Morell Mackenzie's studies have led him to conclude that in all cases of laryngeal phthisis, with but few, if any, exceptions, tuberculosis of the mucous and submucous membrane is the sole etiological factor. I need hardly say that the general consensus of opinion coincides with his observations.

This absence of unanimity may, I think, be accounted for by oversight of the fact that every laryngitis occurring in a person the subject of pulmonary tuberculosis is not necessarily of a tuberculous nature; on the contrary, it is within the knowledge of every observer that many cases of lung disease run throughout their course with but trifling, if any, disturbance of the larynx.

The third and last point I raise relates to our ability to diagnose laryngeal tuberculosis by laryngeal signs only. I claim that we not only are in the habit of making a diagnosis of tuberculosis affecting the larynx by laryngeal signs only, but that we frequently are able, even before signs of laryngeal infiltration exist, to foreshadow with very tolerable accuracy prospective laryngeal or lung deposit by laryngeal indications other than those of infiltration.

QUARTERLY RETROSPECT OF SURGERY.

BY FRANCIS J. SHEPHERD, M.D., C.M., M.R.C.S., ENG.
Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on Operative Surgery, McGill University.

Treatment of Fracture of the Patella.—Mr. Fred. Treves (*Brit. Med. Journal*, July 24th, 1886) says that the methods of dealing with this common injury are not yet entirely satisfactory, and that the discussion on the subject is not yet closed. There are certain cases where the fracture is transverse, and where the fibrous expansions by the side of the bone are untorn, that present so little disturbance of parts that the mere securing of the limb in the straight position is sufficient to get a good result. In other cases, good results are obtained by strapping or splints. The application of Malgaigne's hooks, applied to felt discs moulded over the fragments, has met with certain success.

Lister's operation of opening the joint and suturing the broken fragments has been practised extensively by some surgeons. According to Mr. Treves, the objections to this operation are an anæsthetic is required and the operation is not without risk, and also one median suture is not always sufficient. Another plan is that where no skin incision is used, but a silver wire is passed through the joint under the fragments, and is so adjusted that when the two free ends are twisted together over a pad on the skin the broken bones are brought together. This plan has proved very successful in the hands of several surgeons. The mode of treatment, however, advocated by Mr. Treves is the old one by the use of Malgaigne's hooks; he says that, theoretically, it is difficult to conceive a better means of bringing the fragments of the broken patella together. When first introduced, the objections to Malgaigne's hooks were due to the fact that the points of the hooks excited suppuration, and as the points of the upper hooks always pierced the synovial member, suppuration often spread to the joint. Antiseptic surgery has removed this reproach, and with the disappearance of this condition must vanish the objections to this excellent method of treatment. According to Mr. Treves, tho other advantages are that no anæsthetic is required, the maintenance of the apparatus causes no inconvenience, and before the hooks are inserted the fluid in the joint can be evacuated. Mr. Treves' method is as follows: The limb is secured on an ordinary straight back-splint with a foot-piece, which is secured to the leg by straps and buckles. The postion of the patella is carefully marked out in pencil on the skin, and the sites for the points of the hooks indicated; four punctures are now made with a sharp tenotome at the points at which the hooks are to enter; the punctures in each case should pass down to the bone. The two upper punctures enter the joint, and any fluid can be evacuated through them; the lower punctures are without the joint. The hooks should be aseptic, and the upper and lower ones applied separately, the first introduced being the lower. They should then be screwed together till the fragments are in close contact. To prevent riding of the upper fragment, a tube passing over the upper pair of hooks and fixed under the knee with a leaden clamp should be applied.

Mr. Treves always applies the hooks under the spray, and administers no anæsthetic. After the hooks are accurately applied the spray is withdrawn and the punctures covered with iodoform. The limb should be placed on an inclined plane, and the knee should be kept always fully exposed to the air. This, he thinks, hastens healing. The hooks are usually left in for six weeks. In the cases treated by Mr. Treves, no elevation of temperature, pain or suppuration has occurred, and the union was in all cases firm and secure.

New Operation for Fractured Patella, by subcutaneous patellar wire suture.—Prof. Anton Ceci of Genna (*Deutsch. Zeitsch. f. Chir.*, Bd. XXIII., Nos. 3 and 4, 1886) advocates the following method of treating fractured patella: The effused fluid is first removed by aspiration, and, if it be large, the joint washed out afterwards, or a splint may be applied and the operation deferred for three or four days. The operation is performed with the help of a drill, perforated at the end with an eye. An assistant holds the limb of the completely narcotized patient in hyper-extension, approximating the two fragments of the patella and moving the skin in folds towards the centre of the patella. The operator then pierces the skin with the drill under the patella, and forces it diagonally through the substance of the patella, keeping it parallel to the large surface of bone, transfixing it in an oblique direction from the inner part below, upwards and outwards. The point passes through the skin above, the eye is now threaded with silver wire, and is then retracted and pulled through the patella and out at the first point of insertion. The operation is then repeated in the other diagonal line of the patella, but at right angles to the first perforation, having previously passed the wire under the skin and the lower margin of the patella to the lateral aspect of the bone. The end of the wire is again passed under the skin above the upper margin of the patella, and finally the two ends are twisted tightly together, and the twisted part is buried. The assistant must hold the fragments in apposition unmoved throughout the operation, and care must be taken not to get the wire tangled or twisted into loops. The skin having been moved out of place during the drilling, the perforations are removed from the wire, when the tension is relaxed. The wire lies to a great extent buried in the substance of the patella, in the figure 8 shape.*—(*Annals of Surgery*.)

Hardly a year passes without the introduction of a new method of treating fracture of the patella or the introduction of an old one. The last method introduced is fashionable for a time, and then falls into disuse and is forgotten, to be revived again at some future time as something better than anything else. There is no doubt that the good result of treatment depends considerably on the kind of fracture and the amount of injury and effusion. Good results may be obtained by various methods, and each one has its failures also. Lister's method of treating fractured patella in the hands of men who have not fully imbibed the principles of antiseptic surgery has led to the loss of not a few legs and some lives. Philadelphia surgeons have for some time past used Malgaigne's hooks in much the same way as that advocated by Mr. Treves, and they say the results obtained are excellent and the danger nil. Professor Ceci's method appears so complicated that few will attempt it, and, besides, the advantages do not appear to be very great. For several years past I have adopted Mr. Heath's method of treatment by aspiration, if there is effusion, and then the application of a plaster-of-paris bandage. The results obtained are good, and in the last two cases, in which the plaster was applied within an hour of the receipt of the injury, the union after several months was particularly close. The method has these advantages: it is safe, simple, and can be applied by medical men in the country (who have not the appliances of a hospital at hand) with the greatest ease. The materials are always ready, and take but little time and skill to apply.

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* Other methods of treating fractured patella are fully discussed in the Retrospects of June, 1882, and December, 1883.

Surgery of the Brain.—At the recent meeting of the British Medical Association held at Brighton, Mr. Victor Horsley read a paper entitled "*Advances in the Surgery of the Central Nervous System*" (*Lancet*, Aug. 21st, 1886, and *Brit. Med. Jour.*, Oct. 9th, 1886). In introducing the subject, the author laid special weight on the fact that all the advantages, both scientific and operative claimed in his paper, were the results of lessons learned from experiments on monkeys, a fact worthy of noting in these anti-vivisection days. It had been said that monkeys were not quite like human beings, but this was not correct from a surgical standpoint. The chief facts of the paper are as follows: (1) The preparation of the patient for the operation, which consisted in shaving the scalp and then thoroughly cleansing the head. (2) Anæsthesia; he preferred chloroform, giving first a hypodermic of a quarter of a grain of morphia—the morphia produces contraction of the arterioles of the brain, and there is in consequence less oozing, and a less amount of chloroform is needed. (3) Strict Listerism, pure and simple, spray and gauze dressings. (4) The line of incision—instead of the old-fashioned crucial flaps, a semi-lunar incision was advocated, as being easily pushed out of the way of the later steps of the operation, as less likely to suffer from interference with the blood circulation, and therefore with the vitality of the flap. (5) The use of large trephines—it is difficult to hit the exact spot, and yet so necessary to have ample room, that the old small trephines are comparatively useless. (6) MacEwen's plan of replacing the bone. The bone, after removal, should be preserved in hot carbolized sponges, cut up into small pieces and placed in the opening between the dura mater and the scalp. The brain being exposed, the first question to decide is whether it bulged into the opening or not. Normal brain, Mr. Horsley said, never bulges at first, but if the operation lasts for an hour or more, some bulging becomes evident. If the brain bulges at first, it is presumptive evidence of the presence of a tumor ; a yellowish color and venous congestion are likewise suggestive points. The lesion being found, how is it to be treated ? The use of the actual cautery leads to secondary troubles, so he prefers to use a knife to excise the necessary structures. There is generally considerable oozing at first, and if so, a sponge should be pressed into the incision. The tumor or diseased part having been removed, the wound should be closed as quickly and as accurately as possible, as primary union of the flaps was almost essential to success. Drainage is required for 24 hours only ; if more serum collects after this, a small probe should be passed in to let it out, but a little tension does no harm, as it keeps the brain matter in its place until cicatrization is complete. Hernia cerebri only occurs as the result of decomposition. Mr. Horsley, at the Brighton meeting, showed three patients on whom he had operated. They had recovered from the operation, and were well enough to travel. The chief clinical symptoms in these cases had been epileptiform fits. Two of the cases following injury, with subsequent scarring of the convolutions. The third case was one of tumor, which was accurately localized by the manner in which the fits invariably commenced. In two of the cases the wound healed by first intention in four days, and in the third in seven days. In the tumor case, half an inch of surrounding cerebral tissue was removed.

In the discussion which followed the reading of the paper, Prof. Charcot (Paris), after congratulating Mr. Horsley on his brilliant success, said the patients exhibited might be taken (1) as new proofs of the value of the legitimate use of animals for purposes of experimentation, and (2) as confirmation of the doctrines of localization of the functions of the brain.

Mr. Hughlings-Jackson thought that every person with epileptiform seizures was the subject of a very localized lesion of some kind, either a tumor or otherwise. If the aura were very localized and constant, it was in favor of tumor. He would, however, recommend an operation, even if tumor were not present. He had changed his views with regard to double optic neuritis, for tumors could exist without it. He thought that in removing the tumor the adjoining portions of the brain should be removed, for the tumor produced fits by altering that portion of the brain on which it was seated. He would cut out too much rather than too little. Unfortunately there would occur cases with more than one tumor in the brain, or with more than one tumor on one side of the brain.

Since this paper was read, Mr. Horsley has had another successful case of operation for brain tumor (*Brit. Med. Journal*, Oct. 2nd, 1886). The patient was a man who had been absolutely hemiplegic for a month, and had passed into a semi-comatose condition; before these symptoms developed he had endured terrible pain in the head, and had suffered from fits. On the 23rd of September last Mr. Horsley trephined over the motor region of the right hemisphere, and after enlarging the aperture made by the trephine, succeeded in removing a large tumor from the brain. The tumor weighed 4½ ounces, was 3 inches long, 2 inches broad, and 2 inches deep. On the day after the operation, the patient was perfectly rational and even amusing in his conversation, and said he was quite free from pain. On September 27th the wound was entirely healed, and the man had recovered some power in his legs.

The results obtained by Mr. Horsley are certainly most brilliant, and with proper antiseptic precautions the operation of trephining the skull and incising the brain does not seem to be a specially dangerous one. The improvements introduced by Mr. Horsley in the treatment of the wound are valuable, especially the previous thorough cleansing of the scalp and the semilunar incision. Mr. Horsley has also established by these successful operations that the repair of wounds in the lower animals does not differ from that in the human subject, a point which was, till quite recently, disputed. He has also proved that great benefits may be conferred on the human race by properly conducted experiments on the lower animals, these operations being the direct results of experiments performed on the brains of monkeys.

For further information about Mr. Horsley's operations, we refer the reader to the paper published in full in the *British Medical Journal* of October 9th, 1886. In connection with this abstract, the reader is advised to consult the Retrospect for June, 1885, where the early operations on the brain are described and a valuable paper on the "Operative Surgery of the Brain," by John B. Roberts, M.D., in the Transactiens of the American Surgical Association for 1885.

The Danger of Wounding the Diaphragm in Operations for Empyema.—M. Lagrange says (*Archives Générales de Médecine*, Sept. 1886) that wounding of the diaphragm in operating for empyema is an accident the conditions of which it is necessary to know in order to avoid. He holds that it is a mistaken idea to suppose that the accident is rare, and cites cases in which it occurred when the 7th intercostal space was opened, and Kirmisson on one occasion found the diaphragm as high as the 6th intercostal space. This anomalous position of the diaphragm may be caused by adherence of that structure to the lung, with retraction of the lung or retraction of the parietes of the thorax, with consequent exaggeration of curve of the diaphragm; and it is a mistake to suppose, as is stated in the text-books, that pleural effusion is always accompanied by descent of the diaphragm. In many cases it is impossible to tell the exact position of the diaphragm, especially when it is intimately adherent to the thoracic walls. He advocates strongly that the operation of opening the pleura for the evacuation of pus should never be performed lower than the 5th intercostal space. Cases are recorded where the diaphragm has been wounded, and even the abdominal cavity opened and some of the contained viscera incised. At the Montreal General Hospital it has been the custom of late to open the pleural cavity low down, not uncommonly in the 8th and 9th spaces. I myself have frequently done this, and without any untoward result. The diaphragm can always be felt through the incision. It is a good plan, and one which I have always adopted, after cutting through the tissues down to the pleura, to use a dressing forceps, if nothing but pleura intervenes it is easily perforated, and pus immediately exudes, but if diaphragm should be present, the forceps cannot be pushed through it without the exercise of considerable force, and the condition may be recognized before harm is done. The value of a low opening is very great, because we thus thoroughly empty the pleural cavity and run no risk of leaving the narrow posterior portion filled with pus. If the opening be made high up, this cavity cannot be thoroughly evacuated without washing out with some fluid, a proceeding which always complicates the operation, may introduce septic matter, and retards healing.

Limits of the Pleura.—In this connection a paper by Mr. W. A. Lane, which appeared in the April number of the *Journal of Anatomy and Physiology*, is interesting. Mr. Lane says that the lower limit of the pleura, behind, can be determined clinically by measuring the lower ribs, especially the 12th. If the 12th ribs are under two inches in length, the pleura may not even reach their upper margins, as the length of this rib increases, the pleura extends still lower down, and in some instances may reach a point 1½ inches below the lower border of the rib. Laterally the lower limit of the pleura crosses the 7th costal cartilage obliquely three-quarters of an inch below its articulation with this rib, then the end of the 8th rib, the 9th rib a quarter of an inch above its extremity, the 10th three-quarters of an inch above, and the 11th one and a half inches from its outer end. In the axillary line, Mr. Lane found that in the majority of cases the lower limit crossed the 10th space or the 11th rib, not unfrequently lower on one side than the other, but not much more frequently on one side.—(*Medical News*, Oct. 23rd, 1886.)

Final Results of Operation for Cancer of the Lip.—In the *Centrallblatt für Chirurgie*, June 19th, 1886, there is an interesting series of statistics relative to the efficacy of operation for cancer of the lip, collected by Dr. A. Wörner from Prof. Braun's clinic at Tübingen and from other sources. Of the 305 cases in Tübingen, one in nine occurred in women. The average age was 62 years. Fifty-one of the cases occurred in inveterate tobacco smokers; traumatism was the cause in eleven cases; neglected warts in seven cases. In only sixteen was the upper lip affected. Three hundred and fifty-four operations were performed on 277 patients. In the greater number a V-shaped incision was sufficient to remove the disease. In 28 cases, excision of the maxilla was necessary. Of the 277 patients operated on, the disease recurred in 111; 87.2 per cent. recurred within a year; 12·7 per cent. after the lapse of one or more years. In one case the disease returned nine years after the operation. The growth was again removed, and the patient lived eleven years without a relapse, and died finally of old age. Of the 277 cases, 89 (or 32.13 per cent.) were still living without a return of the disease at an average period of 5.8 years after excision; and 71 (or 25.63 per cent.) had died of other affections at an average period of freedom from relapse of 8.4 years after operation. Of the whole number of 160 cases, 106 lived over three years. The mortality from the operation itself amounted to 5.77 per cent. Wörner also compares the previous reports on this subject made by Thiersch, von Bergmann, Billroth, Kocher, etc. In all, 866 cases. Of the whole number of recurrences, 87.6 occurred in the first year; 244 (or over 28 per cent.) were free from a return after three years.

These results are certainly encouraging, and the fact that in so large a number of cases there is no return must encourage surgeons to strongly advocate operation, even in advanced cases, with the view of prolonging life. If there be a recurrence, it is generally within a year. If the patient passes three years without recurrence, he is tolerably safe.

Stomach Operations performed at Prof. Billroth's Klinik from 1880 *to* 1885.—*Gastrotomy :* One case ; this was done on a patient aged 19 for the extraction of some teeth : patient recovered in five weeks. *Gastrorraphy :* Two cases ; both died. In one, the operation was performed for rupture of the stomach after a plentiful meal ; death occurred from collapse in four hours. In the other, from a gunshot wound in a woman aged 63 ; death from peritonitis and collapse in twenty-eight hours. *Gastrostomy :* Four cases. In one for œsophageal cancer, the result of swallowing a caustic alkali ; death on the ninth day from inanition. In the second, for carcinomatous stricture at the cardiac orifice ; death one month and a half after operation from croupous pneumonia. In the third and fourth, for the same reason as the second ; one died in twenty-four hours from inanition, the other in eighteen days from the same cause. *Gastrectomy :* Eighteen cases, of which eight recovered and ten died. These cases were, 14 pylorectomies for carcinoma, with 6 recoveries ; 1 pylorectomy combined with gastro-enterostomy, death in four months from a return of the disease ; 3 pylorectomies for cicatricial stenosis, with 1 recovery ; 1 partial resection of pylorus, followed by death. In all, 25 cases, with 9 recoveries.—(*Glasgow Medical Journal*, Aug. 1886 ; quoted in *Medical News*.)

Treatment of Erysipelas.—Dr. Haberkorn (*Centralblatt für Chirurgie*, No. 19, 1886) speaks highly of the internal administration of benzoate of sodium. He thinks it a most useful remedy in all infectious diseases, especially the exanthems. In erysipelas, he gives it in doses of from 4 to 5 drachms daily, in mucilage or seltzer water. In nearly every case the temperature fell to normal in 48 hours. No local applications were used. The number of cases treated was nearly fifty, and none resulted fatally. Dr. H. asks surgeons to make a trial of this simple remedy.

Disinfection of the Hands.—Dr. Kümmell (*Centralblatt f. Chirurgie*, No. 17, 1886), after detailing the various results arrived at by himself and others in connection with this point, describes a series of experiments recently made by himself in order to determine the different extent of cleansing that was necessary after being exposed (1) to ordinary sources of dirt, and (2) to special sources, such as post mortems, etc. The general results are as follows: 1, After ordinary washing with soap and water, the hands were placed in a bacterium-growing medium, and growths of fungi and bacteria were observed. If the hands had been specially infected, they were capable of affecting a gelatine medium at least a week afterwards. 2, Almost all power of infection was removed from the hands by a three minutes' washing and brushing with potash soap and hot water, followed by disinfection with carbolic acid (3 per cent), chlorine water (50 per cent.), or sublimate solution (1 per cent.) Of these solutions, chlorine water appears to be the most efficacious. When, however, the dirt of a post-mortem has to be got rid of, the scrubbing must be longer continued, viz., for five minutes, and it is better to employ a powerful potash soap, after which a 5 per cent. solution of carbolic acid should be used and the hands thoroughly soaked in it, and then brushed with a good nail-brush and soap again. If sublimate solution is employed, the 1 per cent. is usually, but not invariably, satisfactory. It is most important to get the hands into such a condition by washing with soap and water that the disinfectant can obtain ready access to all the cracks and crevices. The water should be as warm as the hands will stand, and the arms should be bared and thoroughly washed as well. It is well to bear in mind that the clothes, as well as the hands, may be sources of infection, and that all attempts should be made to prevent their acting as a source of trouble as well.—(Quoted in *Practitioner*, July 1886.)

Intubation of the Glottis.—Dr. Ingals states that he has employed intubation as a substitute for tracheotomy in two cases of membranous croup, and although both patients died, he is favorably impressed with the possibilities of the tubes. The operation can be done easily, it is free from danger, it so promptly relieves serious symptoms, that Dr. Ingals thinks that it will soon become a recognized treatment among general practitioners. "Looking at the intubation of the larynx from our present standpoint, it seems well adapted to the following cases: (1) For diphtheritic and croupous stenosis of the larynx occurring in children under 3½ years of age. (2) For cases of the same affection in older children in which, from any cause, the physician wishes to defer the operation of tracheotomy. (3) For those cases in which consent to tracheotomy cannot be obtained. (4) For those cases in which proper nursing could not be secured. (5) For severe cases of spasmodic croup in children under 10. (6) For simple stenosis of the larynx (not diphtheritic) in children. (7) With proper sized tubes, it might be of value in the treatment of the various forms of laryngeal stenosis in adults.—(*Journal of American Medical Association*, Feb. 6th, 1886.)

Lanolin in Skin Diseases.—Dr. Stern (*Deutsch. Med. Woch.*, No. 15, 1886) states the experience of this remedy obtained in Behrend's Poliklinik at Berlin. An useful ointment should possess certain qualities. It should not be too rapidly absorbed. It must cling to the surfaces for some time, since there the pathological changes exist which are to be removed by its use. It should therefore stand between substances which are too quickly absorbed and those which are not absorbed at all. The officinal Ung. Diachyli unites these peculiarities in a very perfect manner, for on the one hand it permeates the epidermis, and on the other it remains a certain time on the surface. These render it specially suitable for the treatment of eczema. An excellent modification of this ointment is as follows: Emp. Plumbi, simp. Lanolini, āā 50.0; Adipis, 10.0. This ointment shows portions of the salve still present on the skin several days after application. On suitable localities a daily application of this ointment is unnecessary; several cases of eczema of the hands healed quickly when the salve, spread on cloth, was not changed oftener than once in three days. Two preparations have been used in seborrhœa capitis; a lanoline cream: Cetacei, 10.0; Ol. Olivæ, 30.0; Lanolini, 40.0; Aquæ, 50.0, and a lanolin pomade: Lanolini, 50.0; Ol. Theobromæ, Adipis, āā 5.0; Tinct. Benzoin, 3.0; Ol. Etheriæ Ejusd. gutt. ii. With these the scales disappeared with remarkable rapidity, but sufficient time had not elapsed to determine if the cure was permanent. In a case of psoriasis eruption, too, after eight days' use of lanolin cream, the redness had much diminished, and the tendency to bleeding, on scraping the patches, had much lessened, and, indeed, such a marked improvement in the condition generally of the scalp had taken place as to raise hopes that the complaint might thus be quickly caused to disappear. A 5 per cent. chrysarobin lanolin salve, on the contrary, did not appear to exert a more favorable effect on the eruption of psoriasis than the simple one of lanolin. The special advantage of lanolin as a basis for ointments over those previously in use seems to be its long persistence on the surface of the skin, combined with its simultaneous retention in the epidermis.—(Quoted in the *Edinburgh Medical Journal*, Nov. 1886.)

Treatment of Skin Diseases by Muslin Plasters.—The muslin plasters with a gutta-percha basis which Dr. Unna introduced are recommended by Hofmann. He prescribes (1) boracic acid plasters for ulcers of the legs and bed-sores ; (2) chrysarobin plaster, which has the advantage of combining the irritating action to the point of application ; (3) in milder cases of dry circumscribed eczema, zinc plaster ; (4) for severer forms of eczema, zinc tar plaster ; (5) naphthol plaster for affections attended with itching ; (6) for softening thickened layers of epidermis, salicylic and salicylic-mercurial and salicylic-cannabis plasters,—these can also be used to advantage in sycosis, lupus, and severe case of acne ; (7) for rheumatic affections, ichthyol plaster ; (8) resorcin plaster, employed with good results in arthritis urticaria acute and in ingrowing toe-nails ; (9) in various inflammatory processes, mercurial-carbolic plaster.—(*Deutsch. Med. Woch.*, No. 51, 1885 ; quoted in *Practitioner*, Aug. '86.)

Healing under Blood-clot.—Schede of Hamburg, at the recent meeting of the congress of German surgeons, read a most interesting paper on the above subject. (*Medical News Editorial*, Sept. 26th, '86.) Since the general use of antiseptics it has been frequently observed that the presence of a clot may not do any harm, that, in fact, the clot may become organized. Observing this fact, Schede has boldly made use of the blood poured out into a variety of surgical wounds to secure a protecting covering, which has the advantage of doing away with the necessity for drainage or compression. In Phelps' operation for club-foot (open division of all contracted soft parts, down to and including the astragalo-scaphoid ligament), he found that if he simply covered the gaping wound with a bridge of protective silk, placed over this a good antiseptic dressing, and secured fixation with plaster bandages, he could leave the wound to itself without concern, and that, after three or four weeks, there would be solid cicatrization, or only a narrow strip of granulation or a little strip of leather-colored clot still attached along the middle, as the sole remains of the large mass of blood which filled the wound immediately after the operation· In this way not only does the skin unite, but all the soft parts (muscles, tendons, ligaments) assume their normal functions. In manner similar to this, Schede found a very large number of operations to heal without mishap. Of these he gives a list comprising 241 operations, including 40 resections of joints, with 37 typical recoveries; one resection of a piece of the wall of the thorax as large as the palm of the hand, with typical healing; 18 operations in which he chiselled out tuberculous foci in bones, with free opening of the joint, all with typical healing; 29 cases of removal of necrosed bone, with 27 typical recoveries; 20 open operations for club-foot, all with typical healing; 10 operations of scraping off of fungous granulations of the sheaths of tendons, with suppuration in two cases only; 24 cases of removal of tumors, with slight suppuration in two. In one case he saw a large blood-clot become organized in the lacerated brain after a severe complicated fracture of the skull. The method pursued in securing these extraordinary results was, where possible, to employ Esmarch's bandage, to observe the most scrupulous asepsis, and to remove every portion of diseased tissue. Large wounds were closed with sutures placed at such intervals as to leave only one or two openings about half an inch long to permit the escape of superfluous blood into the dressing. In some cases a counter opening was made for the purpose. Schede found that the skin united well over considerable cavities, such, for example, as are left after an operation for necrosis. No drainage-tube was used. The wound was covered with a piece of protective for two purposes: first, to secure complete filling of the wound with the blood-clot, and, second, to keep this moist by preventing its absorption by the dressings, which were only intended to absorb the excess of blood. Over all was placed a thick antiseptic dressing of sublimate gauze and cotton and sublimate moss bags. It is important, in order to secure filling up of the wound with blood, that when a counter opening is made, it shall be at the highest point, instead of, as usual, at the lowest. When no large vessels were involved, and the bleeding was not profuse, no notice was taken of it. Perfect asepsis is indispensable to Schede's method· If any doubt exists as to having secured it, he advises filling up the wound with antiseptic material, such as iodoform gauze, sublimate gauze, or bismuth, and leaving it till granulation is established, after which the filling of the wound with blood can be secured by shaving off the granulation, and thus the cure will be materially hastened.

This method should answer well in cases of resection of joints, as ankle and elbow, and, in fact, is the same method of healing as takes place in cases of severe compound fractures, where the wound, after thorough cleansing, is immediately closed. The difficulty will always be in securing perfect asepsis.

Reviews and Notices of Books.

A Manual of Physiology. A Text-book for Students of Medicine.—By GERALD F. YEO, M.D., F.R.C.S., Professor of Physiology, King's College, London, etc. Second edition, revised by the author. Philadelphia: P. Blakiston, Son & Co.

Unfortunate and unreasonable as it is, the fact nevertheless remains, that the great majority of students of medicine are introduced to physiology before they have any knowledge of anatomy, coarse or microscopic, or any practical acquaintance with physics, chemistry, or general biology. No book that we know of, so meets the case of such students as Yeo's manual. It furnishes in its early chapters a useful account of certain subjects in general biology; and throughout the work sufficient reference is made to anatomy to supply, as well as can be done in a work on physiology, what is absolutely necessary for the comprehension of the functions of the organs considered. The student is made sufficiently well acquainted with modern methods of investigation; and the graphic tracings of important results are introduced in a way calculated to impart knowledge in the most impressive manner, and at the same time familiarize him with those methods of procedure which must more and more find a place in clinical medicine as well as physiology.

The book is thoroughly abreast of the times, clearly written, and well illustrated. The main facts of the science are stated in a methodical manner that makes the rapid review of the subject easy for the learner, no small matter to the heavily burthened student. A second edition has very soon been called for. Its use in McGill University during the past two years has given great satisfaction, warranting its continuance.

Insanity and its Treatment. Lectures on the Treatment, Medical and Legal, of Insane Patients.—By G. FIELDING BLANDFORD, M.D., Oxon, F.R.C.P.L., late Lecturer on Psychological Medicine at the School of St. George's Hospital, London. Third edition. Together with Types of Insanity: An Illustrated Guide in the Physical Diagnosis of Mental Disease. By A. McLANE HAMILTON, M.D., one of the Consulting Physicians to the Insane Asylums of New York city and the Hudson River State Hospital for the Insane, etc. Supplied only to subscribers for "Wood's Library of Standard Medical Authors" for 1886, (twelve volumes, price $15), of which this is Vol. II. New York: Wm. Wood & Co.

Dr. Blandford's work on insanity has been before the profession for several years, and is recognized as a valuable textbook. This, the third edition, contains all the recent advances made in this department of medicine. It is eminently suited for the general practitioner. The American publishers have greatly enhanced the practical value of the work by the addition of Dr. Hamilton's plates on the types of insanity.

A Manual of Diseases of the Nervous System.—By W. R. Gowers, M.D., F.R.C.P., Assistant Professor of Clinical Medicine in University College, London; Physician to University College Hospital and to the National Hospital for the Paralyzed and Epileptic. Vol. I.—Diseases of the Spinal Cord and Nerves. London: J. & A. Churchill.

During the past decade, no department of practical medicine has had more devoted and able workers than that of neurology. The natural result being that a flood of light has been thrown upon many hitherto obscure diseases. The author of the volume under consideration holds a distinguished position in the great school of English neurologists. He is the author of numerous works on the nervous system, all of which are universally accepted as standard works. The present volume is the first of a complete account of the nervous system and its diseases. It deals with the spinal cord and nerves. The second volume, dealing with the diseases of the brain and general diseases of the nervous system, is in the press. The first volume opens with an account of the general symptomatology of diseases of the spine and nerves. There is a very full and accurate description of the different varieties of neuritis, including the simple multiple, endemic and leprous forms. In the third part of his work the author treats of diseases of the spinal cord. He first gives a very complete account of our present knowledge of the anatomy and physiology of the cord. We know of no single work where the enquirer will find such a full and clear description. Many practitioners object to have so-called practical works laden with anatomy and physiology. If such an objection has ever any force, it is certainly not in a work on the nervous system. It is quite impossible to either diagnose or treat with any degree of intelligence the great majority of the diseases of the spine without an accurate knowledge of its anatomy and functions. After fully considering the diseases of the vertebral column and the membranes of the cord, the different forms of myelitis are taken up. Dr. Gowers makes some valuable suggestions when speaking of the pathology of acute ascending or Landry's paralysis. He adduces reasons that make it probable that this curious malady is owing to some toxic influence. The fact that no constant or definite lesion has ever been found in this disease, and, further, the very frequent occurrence of acute swelling of the spleen, are the chief reasons advanced for the hypothesis that it is due to some toxic influence. He looks upon the terminations of the pyramidal fibres in the anterior cornua as the parts that primarily and principally suffer. Its beginning in the lumbar cord is explained on the ground that here these fibres are so far removed from their trophic centre in the cerebral cortex that they naturally suffer first. The nutritional stability is the lower, the further the fibre is distant from its trophic centre. Of the nature or origin of this toxic influence nothing is known. The degenerations of the cord, including tabes, lateral sclerosis, ataxic paraplegia, hereditary ataxia and chronic muscular atrophy, are all elaborately dealt with. As the author was the first neurologist to point out the great influence that syphilis plays in bringing on tabes dorsalis, it is instructive to know that his later experience confirms all that he said previously on this intimate relationship.

The work is profusely illustrated, and well printed. It will certainly become very popular, as it represents the present state of a difficult, but all-important subject better than any other work with which we are acquainted.

The Physician's Visiting List for 1887.—Philadelphia: P. Blakiston, Son & Co.

The present is the 36th year of this publication, and it seems able to hold its own against most of its more recent rivals. Besides the contents hitherto comprised, the following new features have been introduced: Disinfectants and Disinfecting; Examination of Urine; List of Standard Reference Books; Incompatibles, and a Cash Account. It presents, as usual, a very neat and finished appearance.

The Medical News Visiting List, 1887.—Philadelphia: Lea Brothers & Co.

This list, elegantly mounted, is also carefully and conveniently arranged as to contents. Besides the regular diary for registration of visits, etc., it furnishes weights and measures, comparative scales, poisons, doses, ligation of arteries, and a host of other desirable information to have at hand for reference. It is by many preferred to all others.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Annual Meeting, October 8th, 1886.

J. C. CAMERON, M.D., 1ST VICE-PRESIDENT, IN THE CHAIR.

The annual meeting of the Society was held on Friday, the 8th of October. Drs. J. H. Y. Grant, R. H. Wilson and A. F. Schmidt were proposed for membership.

The treasurer of last year, Dr. Perrigo, and the secretary, Dr. Gurd, handed in their resignations.

The election of officers for the ensuing year resulted as follows:

President—Dr. J. C. Cameron.
1*st Vice-President*—Dr. Geo. Wilkins.
2*nd Vice-President*—Dr. Alloway.
Secretary—Dr. R. F. Ruttan.
Treasurer—Dr. Lapthorn Smith.
Librarian—Dr. Reed (re-elected).
Council—Drs. Geo. Ross, Rodger and Kennedy (re-elected).
Publication Committee—Drs. Kennedy, Geo. Ross and Bell.

Abdominal Sarcoma.—DR. GEO. ROSS showed organs from a case of abdominal sarcoma. The patient was an active, muscular man, 28 years of age, and came under observation three weeks previously. Six months ago he began to experience lumbar pain, which was called lumbago, and suggestions made of some affection of the kidneys; suffered much, and at times pain was also felt in the abdomen, not infrequently accompanied by vomiting; general health had failed, and he looked somewhat thin and anæmic, although he had kept at his business until the time of his fatal seizure. Having suffered considerably for some days, he was suddenly taken one morning with most agonizing pain in the epigastrium. When seen, he was collapsed-looking, with rapid pulse and cold perspiration. A large quantity of morphia was required before any relief was obtained. The case now looked something like a perforative peritonitis, but the course of events soon negatived this. From this time until death, twenty days later, it was absolutely necessary to give frequent hypodermic injections to control the excessive pain. There was great tenderness in the epigastrium, which region was occupied by a firm projection, rightly believed to be part of the liver. Soon sharp, stabbing and very distressing pains were complained of in the lower part of the chest—first on one side, then on the other. There was no physical evidence of pleurisy, but fine and coarse râles were heard over the back and lateral regions of both lungs. A short cough set in, and, during several days, small quantities of very bright blood were frequently brought up. The diagnosis was, tumor in the back of the abdomen, locality uncertain, but pressing upon the lumbar nerves—the recent and fatal attack being looked upon as due to an acute intra-peritoneal abscess. The specimens were: a mass of sarcoma as large as two fists, which lay against the vertebral column, and had evidently originated in the retro-peritoneal glands. Several nodules of secondary deposit in the liver; the left lobe occupied by an immense clot of blood, entirely disorganizing the part and distending the capsule of the organ (softening of one of the nodules and a profuse hemorrhage into the substance of the liver, distending its capsule had caused the sudden attack described). The lungs contained numerous nodules of similar growth, varying in size from a large pea to a walnut; the largest of them projected considerably from the surface, and corresponded to the seat of the stabbing pains. Dr. Ross remarked upon the importance of abiding pain in any part of the dorsal or lumbar region, with deterioration of the general health, as indicating the presence of such growths in the deep-seated glands. Such hepatic hemorrhage must be a very rare occurrence, and could not have been diagnosed during life.

Stated Meeting, October 22nd, 1886.

J. C. Cameron, M.D., President, in the Chair.

Synovitis of the Knee-joint in Congenital Syphilis.—Dr. Lapthorn Smith exhibited a boy 12 years old, and read the following notes:—He was brought to me by his mother, complaining of a swelling of the right knee, which he had had for nine months or a year. He also had some ill-looking suppurating sores on his throat and chin, due to glands which had formed abscesses and broken, thus destroying a considerable surface of skin. The knee was very much swollen, only slightly red, not very painful, and not at all hot to the touch. As the swelling was pointing, I opened it, and a half ounce of thick yellow pus escaped. The peculiar appearance presented by the boy's nose and teeth enabled me at once to diagnose congenital syphilis. His nose is flattened, and his teeth present the peculiar chisel shape which Mr. Hutchinson says is pathognomonic of congenital syphilis. Moreover, the disease of the knee-joint was much less painful than non-syphilitic knee-joint disease generally is. The mother did not know anything about syphilis, but I elicited the following important information: That her first child was born dead; her second was born dead; the third was this one, born at full time, but affected with "snuffles," mucous patches at the anus, and a copper-color rash over the body, for all of which he was treated; the fourth child was born at full time, only had a slight eruption, and is now alive and well. The fifth, sixth and seventh pregnancies were premature. This boy never had interstitial keratitis, nor any other symptoms than those mentioned. She also informed me that her husband was over 40 when he married—a suspicious circumstance, I thought, so I asked her to send him to me. On seeing him, I astonished him very much by telling him that he had had syphilis in his younger days, which he at once admitted. I placed the boy on cod-liver oil, and gray powder alternated with syrup of iodide of iron, generally; and Scott's dressing locally, alternated with tincture of iodine, under which he rapidly improved. I removed him from school, but I did not deem it advisable to confine him to bed, nor even altogether to the house, all of which I would have done if I had considered it a case of ordinary disease of the knee-joint, because I considered it of importance to keep up his general health. The affected knee is now only a quarter of an inch larger around than the other one, which is now perfectly healthy, although it was somewhat full when he first came. Mr. Clutton of St. Thomas Hospital has collected 13 of these cases, which he calls symmetrical disease of the knee-joint due to hereditary syphilis. What is most interesting about these cases is the prognosis, which is very favorable, contrary to that in ordinary cases; and what is remarkable is that there is little or no pain. This boy could hardly be prevented from running as fast as the other boys in the street, although his knee-joint was so full of liquid that the patella distinctly floated. All of Mr. Clutton's cases were in children between 8 and 12 years of age.

Dr. Bell considered the case a marked one of hereditary syphilis, and advised putting the affected joint at rest.

Laryngeal Phthisis.—Dr. Major introduced to the notice of the Society the treatment of laryngeal phthisis by the injection of lactic acid into the substance of the larynx. (*See page* 280.)

Discussion.—Dr. R. J. B. Howard congratulated Dr. Major on the marked effect of this mode of treatment in the case exhibited. In the earlier stages of laryngeal phthisis he usually applied a weak solution of silver nitrate, and later, iodoform and boracic acid. In all cases of ulceration he found this treatment very efficacious. A relapse of the disease was, in his experience, the general rule.

Dr. F. W. Campbell considered the tendency of modern methods of treating phthisis to be direct applications to the seat of the lesion, but did not believe in neglecting general treatment at the same time.

Dr. Geo. Ross called attention to the beneficial effect of the treatment in the case exhibited. The interesting point about the mode of treatment is the prospect it opens up of being able to destroy the tubercular focus in cases where pulmonary tuberculosis originates in the larynx. Patients have escaped general tuberculosis by excision of an affected joint. Even in pulmonary tuberculosis, where the laryngeal phthisis is secondary, the relief of the intense pain and distress would be a great boon.

Tumor of the Optic Nerve.—Dr. Buller exhibited the tumor and gave the following particulars of the case:—This growth was removed on the 16th of April from the orbit of a little girl 7 years of age. The history of the case and the objective signs were sufficiently distinctive to warrant a diagnosis of tumor of the optic nerve before the operation for its removal was undertaken. The child was well developed and in excellent health. About six months previously an undue prominence of the right eye was noticed, and this had slowly increased. Two months previously the vision was tested by a physician and the eye found to be entirely blind, just as it was when I first saw it on the 15th of April. The amount and character of the proptosis can be pretty well estimated by a glance at this photograph taken the same day. The protrusion was considerable, and almost directly forwards; the movements of the eyeball were slightly impaired, but not more so in one direction than another. No signs of any deep-seated inflammatory process existed, nor was there pulsation or bruit, or change in degree of proptosis from placing the head in such a position as would favor congestion of the parts. The ophthalmoscope showed a greatly swollen optic nerve—unilateral choked disc. This, with the complete and early blindness, were strong points in the diagnosis. I hoped to be able to remove the growth and return the eyeball in position. After dividing the attachment of the outward rectus, and passing the finger between this muscle and the eyeball, it was easy to feel the enormously swollen nerve and trace it to the optic foramen, where it was removed with curved scissors and afterwards separated from the eyeball. There was only moderate bleeding, and, as far as the manipulative procedure was concerned, it would have been easy to return the eyeball, but, on finding that the pulpy growth over the sheath of the nerve extended right up to the optic foramen, I thought the chances of preventing a recurrence of the tumor would be improved by a free application of chloride of zinc paste to the apex of orbit, and under these circumstances deemed it useless to attempt to save the eyeball. Accordingly the eye was removed and the zinc paste applied. The child made a good recovery and returned home in two weeks after the operation. The growth, you will see, is all contained within the sheath of the optic nerve, and forms an ovoid mass about 25 mm. in length and 15 mm. in diameter; it was tolerably firm, and had a pulpy, semi-transparent appearance when removed. I suspect it is a myxo-sarcoma, but Dr. Johnston has kindly made an examination of its histological structure under the microscope, and will perhaps kindly favor us with the result of his investigation.

DR. WYATT JOHNSTON reported the result of the microscopic examination. No trace of nerve tissue was found. The growth was fibrous, and was characterized by a fine meshwork resembling a glioma.

In reply to DR. BELL, DR. BULLER stated that there was no recurrence of the growth.

(*To be continued.*)

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, November 5th, 1886.

THE PRESIDENT, DR. RUTHERFORD, IN THE CHAIR.

(*From our own Correspondent.*)

The Differential Diagnosis between Hysteria and Cerebral Disease.—DR. TYE read a very interesting paper upon this subject. He first referred to the difficulty sometimes experienced in diagnosing hysteria from disease of the brain, such as meningitis, embolism, apoplexy, etc., and cited cases bearing out this difficulty. A few weeks previously he had seen a young girl, 16 years of age, of delicate form and of a nervous temperament, who had been ill for several weeks, lying quietly in bed, but constantly uttering a low, sharp cry. Her eyes were closed, pupils appeared normal and responded to light. There was no elevation of temperature, nor had there been at any time previously. There was no paralysis of the limbs; the skin reflexes and knee jerk were normal, but the catheter was required. The uterus was healthy. The family history was fair. Dr. Tye suspected tubercular disease of the meninges, but could not find positive evidence, while the age, sex and form suggested hysteria, and the symptoms sustained that diagnosis. A few days later, however, there was an elevated temperature, meningeal symptoms became fully developed, and the patient subsequently died. Gowers, in speaking of hysteria, says " there are few organic diseases of the brain that the great mimetic neurosis may not simulate—palsy and spasm, coma and convulsions, pain of any form and degree, giddiness, loss of sight, hearing and speech. Almost every symptom of positive lesion finds its counterpart in the repertory of the functional disturbance which lies latent or manifest within the potentialities of the nervous system of most women and many men, ready to spring into activity on the slightest touch of favoring circumstances." The pathological basis of hysteria seems to be either a want of co-ordinating power or paralysis of the cells of the cortical portion of the brain. In meningitis the cortex suffers most, hence a similarity of manifestations may be expected. Hysteria apparently often exists alone, but frequently co-exists with other diseases, especially cerebral affections, and particularly when tubercle is present. Dr. Grassett, in *Brain* for 1884, has established, by a long series of cases rigidly investigated, that hysteria is a symptom of the tubercular diathesis, and that the manifestations of hysteria, tubercular meningitis, and pulmonary consumption may occur in the same family, or in the same persons at different periods, or that they may all co-exist. He also establishes that when the hysterical symptoms are prominent the tubercular are latent, and develop as the hysteria subsides. Dr. Tye has met with marked examples of this class of cases. Hysterical subjects sometimes develop pyrexia, but rarely, and it is thus of a fugitive character. In meningitis there is usually a slight elevation of temperature from the beginning, although this may be intermittent. When effusion takes place the temperature is often subnormal; hence when a fever continues for some days, we decide there was a lesion. Occasionally there is a state of unconsciousness in hysteria, and a similar condition may be due to effusion. If the patient be a female, or a boy with a former history of functional disturbance, and no pain exists, we may be able to decide. Deglutition is comparatively easy in hysteria, difficult or impossible in the organic case. Rapid breathing or even the Cheyne-Stokes respiration may be seen in hysteria. This later symptom often occurs in the first hysterical attacks; it only occurs in the last stage of grave organic disease, and not transient. In hysterical paralysis, contractions are more marked than in real paralysis. The contractions of hysteria make less resistance, and that resistance is irregular; in real paralysis, resistance is constant. There is no wasting in hysterical paralysis except from long disuse. The skin reflexes are not lost in hysteria, neither is the patellar reflex or ankle clonus. Electrical reactions are present in hysterical paralysis. Hysterical conditions frequently follow strong emotional efforts, and such symptoms increase under observation. In all cases offering difficulties in diagnosis, and where doubt exists, we are justified in giving that doubt in favor of the more serious lesion, or we may state that although the symptoms of hysteria are most prominent, more serious symptoms may yet appear, and more time is required to make a diagnosis. In conclusion, again quoting Gowers, " It must never be forgotten that many organic diseases of the brain produce hysteria. In any case apparently hysterical, the slightest symptom of organic disease is of absolute diagnostic significance, and in the absence of any symptoms of that kind, no other symptom nor former history should be allowed to bias the observers mind." Attention to this rule will often dispel difficulties.

Discussion adjourned until next meeting.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Regular Monthly Meeting, Oct. 5, 1886.

DR. STARK, PRESIDENT, IN THE CHAIR.

(*From our own Correspondent.*)

DR. MCCARGOW exhibited a specimen of an enlarged heart; the heart and pericardium weighed 30 ounces. There had been five or six ounces of fluid in the pericardium. There was a large deposit of lymph and fibrin, and the surface of the pericardium was much roughened.

DR. MALLOCH brought before the Society a patient, aged 21 years, whose right knee he had excised on the 1st of May last. The man walked in without crutch or stick, having a thick-soled boot on the affected side. After the members had examined the knee, and satisfied themselves as to its solidity, Dr. Malloch read the notes of the case. The operation, performed under strict antisepticism, was that of Dr. Fenwick. Watson's splint was used, with paraffine bandages. In all the knee was dressed four times between the day of operation and the 10th of June, when the orignal splint was removed and changed, as the paraffine had got soft from the heat. Plaster bandages were then used; union had not fully taken place. The patient was then allowed up on crutches, subsequently to put his weight on it. The pieces of bone removed showed unmistakeably that there had been ulceration of the cartilages. The man has never suffered in the least from the knee since the operation.

—In the gynæcological section of the late meeting of German naturalists and physicians, Professor Schultze of Jena gave an account of a case of premature labor, where he was unable to remove a decomposing placenta. Symptoms of general infection coming on, he removed the body of the uterus by laparotomy. The patient recovered.

CANADA

Medical and Surgical Journal.

MONTREAL, DEC., 1886.

THE BLOOD AND BLOOD-FORMING ORGANS.

We agree with the Cartwright lecturer of 1886 (Osler) that in no department of physiology has so much time and labor been expended with as little positive result as on the origin and life-history of the blood-corpuscles; and we would add, on the subject of the coagulation of the blood. This is explained, we take it, by the fact that most of the observers have confined their attention too much to certain limited aspects of the subject to the almost entire neglect of others. The investigation of the blood is just one of those subjects upon which a large number of observers might work in concert, each selecting his own field, but with a constant comparison of results. We fear, however, that the resources of physiology are as yet too meagre to permit of much such investigation. Such concerted work has been done in physiology to a limited extent, but it remains upon the whole as an ideal, the realization of which must be left for the future, though we hope the near future.

Bizzozero's work on the corpuscles seems to have borne better than any one else's the test of time and criticism. He has also stated differences in unlike animals, though it does not appear that he realized fully the significance of his own observations; for we insist that in this and in other fields the tacit belief that what is true of one animal, or at least of one vertebrated animal, holds for another is being proved more and more to have been the fruitful source of fallacy in conclusions.

With regard to the coagulation of the blood, it seems to us to be the very Sahara of physiologists. The really pertinent question is not why the blood coagulates when shed, for coagulation is tantamount to death, but why the blood *does not* coagulate in the body, and that is a no more difficult problem than many others, *e.g.*, why muscle plasma does not coagulate into myosin during life; for the blood is also a living tissue. When we have ascertained that two allied substances derived from blood (paraglobulin and fibrinogen), or, according to others, the latter only, suffice when acted on by a so-called ferment to produce clotting, how much are we really wiser from any truly scientific or practical point of view? We know that all of these substances may be injected into the blood without coagulation ensuing. Let us record briefly some of the conclusions of the most recent observers in regard to the so-called *fibrin-ferment.*

A. Schmidt held that the ferment was derived from the white corpuscles, and probably from one kind. Others, including one very recent investigator (Kemp), maintain that coagulation is induced by the *blood-plates*, which furnish probably a fibrin-ferment; while Wooldridge, who has for years been engaged on the problem, is very emphatic in his statement that *lecithin* suffices to set up coagulation. He believes the lecithin is derived in normal clotting from the leucocytes. Several observers object to the view that the leucocytes take the part assigned them, from noticing that coagulation may take place, as in a capillary tube under the microscope, without disintegration of the leucocytes. We think too much has been made of this objection, for Kemp explicitly states his belief that "the connection between the breaking down of the plaques and the coagulation is not histological but chemical, *i.e.*, the plaques appear to give up a soluble substance which is active in coagulation." If this holds for the blood-plates, it may also for the leucocytes.

Now it is interesting to note in this connection that Howell has found that in the king-crab (*Limulus*) the clot is formed apparently wholly of altered leucocytes, the only morphological element in the blood of this animal. Halliburton, however, maintains that coagulation may take place in the blood of Limulus when the corpuscles are filtered off, provided fibrin-ferment be added to the plasma.

The conclusion we draw from an examination of the whole subject is, that coagulation may take place under a variety of circumstances, and at all events that the method, as we prefer to call it rather than the cause, is not the same in all animals, and possibly not the same always in the same animal—*i.e.*, that certain elements or events may at one time take a larger share in the process than at another, and that the question is at any rate a comparatively fruitless one.

Quite otherwise do we view the problems as to origin and life-history of the corpuscles. Till very recently, and indeed even yet, there has been sad lack of physiological knowledge in regard to the so-called blood-forming organs. It has been assumed on the slightest resemblances in structure that the thymus and thyroid organs were blood-formers; but such had absolutely no scientific foundation.

During the past year this subject has been investigated by Gibson. He tested the function of the lymphatic glands as to formation of red-cells by ligature of the thoracic duct in dogs, followed by microscopic examination of the mesenteric glands. His conclusions in regard to the spleen were based on the effects of its removal in dogs, which he finds may be done with perfect safety. He also adduces evidence from cases of surgical ablation of the spleen in man. He practised removal of the thyroid body in dogs also. He shows that the real functions of the thyroid are as yet very imperfectly known, and that the view that it has anything to do with blood-formation is utterly without foundation. On the contrary, it does seem to be closely associated with the well-being of the nervous system, for all those animals from which it has been *wholly* removed, including man, show sooner or later marked impairment of intellectual power and general nervous vigor. A curious result, however, and one of great interest to the surgeon, was the apparently vicarious action of even a small part of the organ. The animals seemed to thrive very well with one-half of the gland or even less.

Gibson's experiments were not so numerous as could be desired, nor in all cases wholly free from objection; but, taken with the results of others, and in the light of the entire literature of the subject, we think his conclusions may be regarded as, upon the whole, well founded, and as fairly representing the state of knowledge up to date. His inferences, in his own words, are as follows:—

1. Nucleated red cells, derived from white corpuscles and colorless marrow cells, are the only forerunners of the non-nucleated red blood-corpuscle throughout the whole of life.

2. The transformation of the colorless cells into nucleated red cells takes place in the bone marrow, spleen, and lymphatic glands.

3. The colorless cells and the nucleated red cells multiply in the blood-forming organs by division.

4. The red bone-marrow plays the most important part in the production of red blood-corpuscles during extra-uterine life.

5. After the production of anæmia, some of the fatty marrow becomes red marrow, and joins in the formation of red blood-corpuscles.

6. The blood-forming action of the spleen is in extra-uterine life a subordinate one, but when the reserve blood-forming capabilities of an animal are called on its activity is greatly increased.

7. After excision of the spleen, a portion of the formerly fatty marrow becomes red marrow, and the lymphatic glands increase their activity as regards the production of red blood-corpuscles.

8. After excision of the spleen, the red corpuscles in the blood decrease in number, and there is a consequent increase in the number of white corpuscles. The red corpuscles return to their normal number within six months, after which there may be a decrease in the number of white corpuscles.

9. The chief function of the lymphatic glands is the production of white corpuscles, but they also, even in normal condition, produce a certain number of red corpuscles. Their activity in the latter respect increases with the necessity for the production of red corpuscles.

10. The spleen and bone-marrow, and possibly also the lymphatic glands, contain cells whose function appears to be to break down red blood-corpuscles.

THE ACTION OF ANTIPYRINE.

There is an almost universal verdict that in antipyrine we have a most powerful antipyretic. That it is certain and quick in its action is generally conceded. There is no doubt that it is more certain and more rapid in its action than all agents of this class used up to the present time, with the exception of cold water. Occasionally, however, we notice reports of disagreeable and even dangerous untoward effects, where it has been administered to reduce an elevated temperature. Dr. Graham of Brussels reported a case last winter where alarming symptoms of collapse followed its administration to a typhoid patient. In the *British Medical Journal* for Oct. 2nd, 1886, Dr. Fairland reports a similar alarming state where it was given to a typhoid patient. The German medical periodicals of the current year contain a considerable number of reports pointing to a like action. The question naturally arises—Is it possible to obtain all the benefits of antipyrine and at the same time to avoid its untoward effects on the circulation? We believe this can be answered in the affirmative. Antipyrine can be given in such a way as to almost preclude the possibility of its acting as a cardiac depressant. It is simply a matter of dosage. The dose should *never* exceed 20 grains; doses of 30 grains and upwards are dangerous. When given in quantities of ten grains and repeated every hour or two until the temperature reaches 101°F., the danger of collapse is practically *nil*. To give larger doses, or to reduce the temperature to below the normal even with less quantities, is not safe.

Many able physicians question the utility of any agent that simply acts as an antipyretic in febrile diseases. They contend that nothing is gained by simply reducing the temperature for a few hours. When the course of the disease is not in any way modified, how is the patient benefited? they ask. Are not the evils arising from the disturbance of the patient's nervous and digestive systems greater than the supposed gain we obtain from lowering the temperature? When we consider the direct pernicious influence that a continuous high temperature has on the nerve centres and muscular tissues, we believe we have quite sufficient justification for the use of those agents whose only effect is to reduce the temperature. The acute granular and fatty cardiac degeneration which is so frequently an active factor in the causation of deaths from typhoid fever and pneumonia, must surely be in some measure prevented or delayed by the judicious use of such an agent as antipryine.

THE GENESIS OF THE ELEMENTS.*

"The nature and probable, or at least possible, origin of the so-called elements" forms a very sensational subject for a paper; but, heretical as it seems to doubt the existence of the elements as we picture them, a careful study of Crookes' paper impresses one strongly with the idea that what is now the accepted notion of an element must in the near future be profoundly modified.

The address is a model one for a mixed audience such as one finds at the British Association; accurate and scientific, yet easy of comprehension and perfectly logical. Though it should be read in its entirety to be fully appreciated, a brief outline of the arguments used may not prove uninteresting.

First of all he discusses the riddle, What are the elements? Text-book definitions such as "bodies which have not been decomposed," or "bodies which increase in weight with every chemical change," he regards as doubly unsatisfactory, inasmuch as they are only provisional, and may be considered at best as confessions of intellectual impotence. Far-seeing philosophers, chemists and physists, such as Herbert Spencer, Faraday, Norman Lockyer, Sir William Thompson and others, have already entertained the idea of the complexity, if not of the decomposibility of our elements. These authorities are quoted by Crookes to show that some such ideas as his own are, so to speak, floating in the scientific atmosphere of the times. Opposed to this weight of authority, however, stands the fact that no element has yet been transformed into another or broken into anything simpler. Hirschel and Clerk Maxwell conclude, upon purely physical grounds, that elements bear the impress of manufactured articles. If the elements represent the finished products, where can we find anything to correspond to the raw material? Should we not expect somewhere in nature to meet with the analogues of the by-products and waste material that accompany manufacture? With confessed inability to produce direct evidence to support this notion of atoms, Crookes resorts to indirect evidence based on the mutual relation of the elementary bodies. His lengthy argument in favor of the composite nature of elements will only admit of a short notice.

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*An address to the chemical section of the British Association by William Crookes, F.R.S., President, Sept. 4th, 1886.

Prout's law—that the atomic weights of all elements are multiples of unity, *i.e.*, of hydrogen—seems to indicate that the elements are not co-equal, but came into existence by some process of development or evolution.

A more important evidence is found in the mode of occurrence of the elements in nature. Nickel and cobalt always occur together, and so similar are they to each other that, says Crookes, "had their compounds been colorless they would probably still be regarded as identical." Platinum is found alloyed with other elements of the same family, while the metals of the rare earths, Yttrium, Samarium, etc., are scarcely separable by chemical processes so nearly identical are they.

The existence of those pseudo elements, the compound radicles cyanogen, ammonium, methyl, etc., must be more than a curious coincidence. They play to perfection the *rôle* of atoms, yet we know they are compound. Dr. Carnelley concludes an elaborate paper on Organic Radicles with the statement that the inorganic elements, as a whole, resemble the hydrocarbon radicles in chemical as well as physical properties.

By such indirect evidence of the complexity of the elements we are led up to the question, How did the elements come into existence, and why have we in round numbers 70 elements instead of 7 or 700? The notion that they are eternal and self-existent, or that they were created by chance, may be discarded as too improbable. As an alternative to such views, Crookes presents us with a comprehensive scheme of genesis by a process of evolution—a plan of inorganic Darwinism that supplements to some extent Laplace's theory of the development of worlds.

We are in imagination carried back to the very beginnings of time; when our solar system was in an ultragaseous condition, when matter, as we know it, had no existence, "before even the sun himself had consolidated from his original protyle."* So high a temperature may be assumed to have existed at that period that even our chemical atoms were in a dissociated condition. But by a cooling process the time comes when protyle is so reduced in temperature that the first step in granulation occurs. Now, if all the known elements were not simultaneously formed at this period, the simplest form of matter, that nearest protyle itself in its nature, must have been the first-born. Hydrogen, then, or perhaps something still simpler, would be first, and remain for a long period the only form of matter as we now know it in existence.

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* A word coined by Crookes as analogous to protoplasm, derived from the Greek *pro* (earlier than) and *ule* (the stuff things are made of).

For reasons of a purely physical nature, the consolidation of protyle at this early period must have proceeded regularly and very slowly, therefore, as we would expect, the early formed elements are well defined, fully developed, and wholly independent of each other. After Hydrogen, with atomic weight =1, came the next simplest element, Lithium (7), then Glucium (9.5), Boron (11), Carbon (12), Nitrogen (14), Oxygen (16), Fluorine (19), Sodium (23), and so on in order of their simplicity to Thorium and Uranium, the heaviest and most complex.

After matter became more abundant, the cooling process became more irregular, hence we have the very conditions that would produce those families of elements like Fe (56), Mu (55), Cr (52), Cobalt and Nickel with identical atomic weights, the platinum groups, and later, the metals of those rare earths, samarskite, gadolinite, etc., which Crookes so aptly described as " the cosmical lumber-room where elements in a state of arrested development are finally aggregated."

With a patience rarely met with outside the walls of a German laboratory, Crookes has been toiling for years in this " cosmical lumber-room," until, by an original process of chemical fractionation, he has seemingly proved beyond doubt that *all the atoms of the recognized element Yttrium are not alike.* The importance of this discovery can scarcely be exaggerated. Is it possible that when we say the atomic weight of copper is 63 we only express the average weight of copper atoms? Do some atoms weigh but 62, and others 64, while only a majority of them conform to the number 63? Are we to expect that some one in the future will prove that in the spectrum of calcium the different bands of red, yellow, blue and green come from different atoms? Professor Crookes has at least turned the thoughts of chemists into new channels, and opened an extensive field for future research.

Can this scheme of evolution be extended beyond the limits of the recognized elements? Before hydrogen one might conceive of elements, but after Thorium and Uranium, the heaviest elements we know of, we are unlikely to find anything to extend the series. But instead of new elements of increasing complexity being formed as the temperature fell, some of the earlier formed elements with strong affinities must have begun to combine, thus giving rise to compounds whose decomposition is not beyond the powers of forces at our command. Hydrogen and oxygen, for example, probably early united to form water.

This far-reaching evolutionary scheme, which we have but roughly sketched, would not be confined to our solar system alone, but would find an analogue in every centre of celestial energy represented to us as a fixed star. In concluding his paper Crookes says: "We cannot, indeed, venture to assert positively that our so-called elements have been evolved from one primordial matter; but we may contend that the balance of evidence fairly weighs in its favor."

Obituary.

—Dr. Alexander Dyce Davidson, Professor of Materia Medica in the University of Aberdeen, died very suddenly on the 22nd of October. While engaged in delivering the second lecture of his course he was struck almost instantaneously by an apoplectic attack, and died an hour afterwards. Dr. Davidson was also Lecturer on Ophthalmology in the University of Aberdeen. He was the author of numerous works devoted chiefly to his specialty. His loss is severely felt by the profession throughout the north of Scotland.

—Dr. Paul Bert, the famous French statesman and physician, died in Tonquin in the early part of November from typhoid fever. He first achieved a great reputation by his interesting physiological researches, especially by his bold experiments for ascertaining the conditions of human existence at different altitudes. He risked his life in several balloon voyages. His work on Anæsthetics is a valuable contribution to scientific pharmacology.

Personal.

G. H. Raymond, M.D. (McGill, '86), has been admitted a Licentiate of the Royal College of Physicians, London.

Dr. Daniel G. Brinton of Philadelphia has been appointed Professor of American Archæology and Linguistics in the University of Pennsylvania.

The polling for the Rectorship of the University of Edinburgh has resulted in the election of Lord Iddesleigh by 347 votes over Sir Lyon Playfair.

Many of our readers will regret to hear that Mr. Joseph Bell has resigned his position of Senior Surgeon to the Royal Infirmary, Edinburgh. He is succeeded by Mr. John Duncan.

W. W. White, T. J. Haythorne and F. J. Seery, all graduates of McGill in 1886, have passed the final examination, and have been admitted to the degrees of L.R.C.P., Ed., L.R.C.S., Ed., and L.F.P. and S., Glasgow.

On the occasion of the celebration of the two hundred and fiftieth anniversary of the University of Harvard, the honorary degree of LL.D. was conferred on Drs. Joseph Leidy and S. W. Mitchell of Philadelphia, and J. S. Billings of Washington.

Medical Items.

—The German anatomists have formed an "Anatomical Association." Prof. Kölliker is named president, and Bardeleben of Jena, secretary.

—Through the recent death of Lady Wilson, widow of the late Sir Erasmus Wilson, the College of Surgeons becomes entitled to the legacy of £200,000 left by Sir Erasmus.

—According to the vital statistics of Germany for 1885, 4,091 males and 1,209 females committed suicide. The methods of self-destruction were as follows: By hanging, 3567; drowning, 1,177; shooting, 611; poisoning, 232; cutting their throats, 112; throwing themselves under railway trains, 77; throwing themselves from heights, 49.

IMPORTANT CAUTION.—The following letter has been addressed to Liebig's Extract of Meat Company Limited, London.—"Accra, Gold Coast Colony, West Africa, 16th September, 1886. Gentlemen, I enclose two labels taken from pots containing *Abominable Compounds*, which I find, after nine months' experience, to be utterly useless. They were supplied to the Medical Department here, I suppose, as genuine 'Liebig.' Having used your extract extensively for ten years, I consider it a most valuable preparation; and sincerely regret it is possible for other firms to impose worthless imitations on credulous people.—Your obedient servant, A. WOODBURN-HERON, Assist. Colonial Surgeon."

CANADA

MEDICAL & SURGICAL JOURNAL

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Original Communications.

THE CAUSATION OF THE HEART-BEAT AND OTHER PROBLEMS IN CARDIAC PHYSIOLOGY.

By T. Wesley Mills, M.A., M.D., L.R.C.P., Eng.,
Professor of Physiology, McGill University, Montreal.

Until very recently, nearly all investigations on the physiology of the heart were made on mammals. This was the case even in scientific Germany, and is explicable by the fact pointed out by Professor Carl Semper, that physiologists being mostly connected with the medical faculties of the universities were led to regard the chief, if not the sole purpose of physiological study to be the advancement of clinical medicine ; consequently their investigations were confined to the mammalian heart, as the one most likely to throw light on the cardiac physiology of man. To this statement the heart of the frog is an exception. It has long been studied by physiologists in all countries ; but even so late as six years ago very little was known of the hearts of other animals from the physiologist's point of view.

It has generally been found that science best ministers to man's material wants in the end if left free to develop itself, as science, totally independent of immediate practical application. It will in such case fall into the hands of the most competent and reliable investigators.

To commence the solution of cardiac problems with the most complex of all hearts—the mammalian—was a most unphilosophical proceeding, especially in this day of evolutionary light. If mammals have been derived from lower forms of life, it follows, at least as the very strongest probability, that their hearts are ancestrally represented in the hearts of lower forms; if so, then plainly the study of the mammalian heart should begin with that of antecedent and simpler developments.

I hope to be able to show that the researches of the last few years have not only thrown a flood of light on cardiac physiology and anatomy in general, but brought us incomparably nearer to a correct appreciation of the complex workings of the mammalian heart itself than we were even three years ago.

The work for the mammalian heart along the new lines of departure in investigation is still in great part to be done. The problem I wish especially to attack in this paper is the cause, or rather causes, of the heart-beat. These have now been fairly well determined for the lower vertebrates. In the light thus afforded, what may we consider as the probable solution of the question for the mammalian heart? The study of this problem will involve, incidentally, that of many others.

When one considers the evolution of the heart morphologically, we are brought back to its beginnings, in connection at least with a nutritive fluid, in contractile tubes, as in the worms among invertebrates; and it would appear that most, if not all, kinds of hearts may be considered as dilations and differentiations of this simple form of pulsatile organ.

Passing by the pulsating vacuoles of the Infusorians as of doubtful significance, the contractile tube seems to be the primitive representative of the heart; and it is very significant that the earliest form of the heart in the embryo of the highest vertebrates is a pulsating tube, the after-changes in which give an epitomized history, to a large extent we may suppose, of the evolution of the vertebrate heart from lower forms.

Moreover, in that lowest of fishes (?), the Amphioxus, the heart is represented by pulsatile vessels. Now in these pulsatile tubes, so far as I know, nervous elements have not been found. The heart of the chick beats on the second day of incubation, when no nervous structures are to be found in it any more than in an Amœba.

Englemann has shown that in the ureter (or a portion of it), and Luchsinger in the veins of the bat's wing, there is automatic contraction of muscular tissue in the entire absence of nervous elements.

Ransom has been unable to find in the heart of the snail (*Helix*) any ganglion cells. This investigator's work on the heart of the Poulp (*Octopus*) has, it seems to me, thrown great light on the whole subject of cardiac physiology. A brief notice of it in this place may be instructive.

The heart in this creature belonging to the most highly developed class of mollusks, the Cephalopods, consists of: (1) a pre-branchial or venous portion, and (2) a post-branchial or arterial portion. The former includes the vena cava, kidney veins, and branchial heart; the latter the auricles and ventricle.

The pre-branchial system collects blood from the veins and drives it through the gills. Two large nerves known as the visceral, and representing the vagi, are given off to the heart. On the auricles, the branchial heart and the gills there is a ganglion connected with the main nerves. The muscular tissue of the ventricle is finely striated; of the auricles, smooth. After the most careful microscopic examination, Ransom asserts the entire *absence* of nerve cells in the substance of the heart of this mollusk. He considers that the ganglia lying on the heart have nothing to do with originating nervous impulses that might serve to cause cardiac pulsation. He believes that they have a co-ordinating influence over the various parts of the cardiac system, and probably act reflexly; after their excision, the heart still beats, but not in normal fashion.

The contractile kidney veins are composed of smooth muscle cells, devoid of ganglia anywhere in their substance.

Long since Bernstein, and more especially Bowditch, showed that the lower two-thirds of the frog's ventricle do not possess the power to contract *automatically*. It has, however, been shown that if this portion of the ventricle be tied upon a perfusion cannula, and some fluid, if only weak saline solution, be passed through it, this quiescent apex will commence to beat when the pressure within it has reached a certain point.

Ransom points out that in the Poulp the heart, and especially the regulative part of the cardiac muscular machinery, the ventricle in this instance, is remarkably sensitive to changes in intra-cardiac pressure.

In my own papers on the Fish and Menobranchus, attention has been called to the readiness with which the heart, especially of fishes, is influenced by even slight changes in intra-cardiac pressure.

Some years ago Roy showed that the work of the heart of the frog is largely dependent on the action of the auricles.

This, taken in connection with other facts more recent, seems to point to intra-cardiac pressure as *one* determining cause of the beat, especially of the ventricle, even in the mammalian heart.

Gaskell has shown that in the Chelonian heart there are circular rings of fibres between its different divisions, and points to these as evidence of structural continuity, explaining the physiological continuity of the beat of the different parts of the tortoise heart.

That the Chelonian heart beats for a time fairly well in the absence of all fluid shows that the intra-cardiac pressure is not an absolutely *essential* factor in this form of heart.

But I have pointed out that a hæmorrhage which would affect but little the beat of the Chelonian heart *arrests* that of the fish. It will thus appear that a factor which may be of the greatest importance in explaining the beat in one form of heart may be of little consequence in others.

Again, Ransom has shown that the different parts of the heart of the Poulp are not structurally continuous as regards muscular tissue, but that between the main divisions of the heart there are zones of connective tissue. But one of the most remarkable examples of both physiological and structural continuity is to be seen in the shark and ray tribe of fishes. As I have pointed out in my paper on the heart of the fish (*Journal of Physiology*, Vol. VII), there seems to be no limit to the ease with which a reversed rhythm may be set up by a slight stimulus to the contractile bulbus.

The heart of the fish seems to be by far the most *sensitive* heart among vertebrated animals, as I have shown in various ways. This heart is often completely and, indeed, permanently arrested by a highly *venous condition* of the blood ; and again and again have I been surprised at noticing the ease with which the whole cardiac machinery can be restored to good behaviour when thus arrested, on giving the fish a fresh supply of oxygen by placing the gills in water.

This, then, brings us to another factor in the causation of the cardiac beat—viz., the character of the nutritive fluid ; and here once more we find the greatest difference in various forms of heart as to the influence of this factor—indeed, differences in individual animals of the same species. What would but little affect a Chelonian heart would suffice to arrest that of the fish ; and the same I have shown to hold for Menobranchus (our Canadian water newt.)

The old notions of the influence of the nervous factor in the causation of the cardiac beat having been greatly disturbed, it remains to inquire what views we are justified in adopting in the light of recent advances. We have seen that intra-cardiac nerve cells are not essential to the heart-beat *per se*, for in some hearts no such cells are found.

Leaving these ganglionic cells for the present, we may inquire what relation the *nerves* distributed to the heart bear to its normal beat. The recent extensive researches on the influence of the vagus nerve on the heart, in the frog by Heidenhain and by Gaskell ; on the land tortoise by the latter ; and on the Terrapin and Sea-turtle by myself, have put the vagus in an entirely new light. To these results some previous reference has been made in this JOURNAL (Jan. 1886 .

It has been shown that whatever may be the constant action of the vagus, it can, under stimulation, greatly modify the heart's action—always in the way of final augmentation or improvement of rhythm ; and I have myself shown that the degree of its beneficial action is *directly proportional to the heart's needs.* This seems to apply to almost all, if not all, the animals as yet examined that have a vagus or closely analagous nerve. It holds, *e.g.*, for the visceral nerve of the Poulp.

Various theories have been from time to time proposed to account for the action of the vagus.

Heidenhain spoke of depressor and augmentor fibres. Gaskell rejected this explanation and held to a "trophic" action of the vagus, entering into a very elaborate explanation of the relation of the inhibitory phase and the after augmentation phase of the heart's action. Later, he has shown that in the frog there are two sets of fibres with different action, and that these fibres are respectively inhibiting fibres proper, which are medullated, and sympathetic fibres which are non-medullated.

Gaskell thought that in the *Crocodilia* he had found a vagus that was a pure depressor; but this I have shown in my paper on the Alligator (*Jour. of Anat. and Phys.*, Vol. XX) to be an error. The vagus in the crocodile tribe is similar in action to that in the Chelonians, etc.

I believe I was myself, however, the first to call attention, in a published paper, to general physiological resemblances between the main sympathetic chain in which the cardiac accelerators run, and the vagus. I pointed out (paper on Terrapin) that stimulation of this chain led to results similar to those obtained by stimulation of the vagus itself, and, indeed, that the same law applied—the worse the cardiac rhythm the more marked the influence. I also called attention to some after-effects (in some cases primary effects)—viz., irregularity or brief stops of the heart which were then difficult to explain. We know now that the two kinds of fibres, inhibitory proper and sympathetic, have in some respects an opposite action on the heart.

Throughout I have maintained that we must look finally for an explanation of these effects in chemistry, in tissue metabolism. Ransom proposed a problem which has since been, in part at least, solved—*i.e.*, solved up to the crucial point. He says:

"If it could be shown that the true vagus fibres of a tortoise or frog in any way tend to increase constructive metabolism, while the sympathetic favored the destructive processes, a step would already be taken in harmonizing the phenomena presented by mollusca and vertebrata and in forming a general interpretation applicable to all."

Gaskell now thinks he has facts which lend strong support to such a view, though I find no mention in his latest paper of this conception as Ransom's; nor, indeed, any notice taken of the work of others, that has served to correct certain of his own previously published views which have later been exchanged for different ones; or that such later views had been previously announced by other investigators.

The most recent explanation in regard to the action of the vagus may then be put thus: The vagus nerve in many animals, possibly in all vertebrates, is in reality the vago-sympathetic. It contains sympathetic fibres which are motor, or whose action is associated with increased muscular contraction, followed by exhaustion; while the inhibitory fibres bring about an arrest of activity, followed by repair of function. We may express the same idea from another point of view by saying that the sympathetic fibres are functionally linked with katabolic or destructive metabolic processes, while the inhibitory fibres modify anabolic or constructive processes. Such a theory is broad, readily grasped, and from many points of view fascinating; but it is open to some objections.

I have shown that the heart of both the Terrapin and the Sea-turtle may be kept inhibited for hours by continued stimulation of the vagi nerves; in one case recorded, inhibition lasted for *six hours.* Now it is difficult to believe that so unstable a thing, as all our knowledge of protoplasm leads us to consider it, could remain in one phase of the metabolic process for six hours. I feel quite satisfied myself that the explanation of nervous and all other vital action must come largely through chemistry; but it would, perhaps, be premature to assume that the chemistry can be reduced to the simplicity indicated by the above theory. One thing is perfectly clear, the vagus and the general welfare of the heart cannot be disassociated, at least in the more complex forms of this organ.

Eichorst and Zander noted degenerative muscular changes following section of both vagi. Similar changes follow section of the nerve of a skeletal muscle. It is certain, therefore, that whether the nerves of the heart are immediately concerned in the causation of the beat or not, they are inseparably connected with the general nutritive processes of the organ. That nerves are not directly concerned in the cardiac pulsation is evident from the fact that the heart beats perfectly well when all its nerves are severed. When we have learned exactly how the nutrition of a skeletal muscle is dependent on nervous connection, we shall probably also have the explanation for the heart muscle ; possibly, also, new light thrown on many forms of cardiac disease.

The functions of the cardiac ganglia at present may be considered undetermined. Are they concerned in origination of motor impulses ? Are they co-ordinative of muscular action ? Are they regulators of nutrition ? There seems to be almost no evidence as yet for any of these views ; but there is abundant evidence that the cardiac nerves can act on the heart-muscle *directly*.

We must certainly believe that the nerves of the heart, amid the ever-varying conditions which this great central pump must meet, are in almost constant action. We must also believe that this action in health is beneficial, both because were it not so, such could never have originated in the evolution of the more complex forms of heart; and because we find that when such influence is not exerted (as after section) the heart tissue degenerates. I have called attention to the fact that stimulation of the vagus at intervals, in a tortoise heart in which only a few fibres were seen pulsating, has led to a beat of the whole organ in a short time. Now if these few fibres could have been made to pulsate without nervous influence, would the same general result have followed ? I believe it would. The very proximity of quiescent muscle fibres, with strong tendency to beat, to others still pulsating suffices to originate in the former processes which are temporally suspended.

Gaskell has shown that if a strip of muscle from the ventricle of the tortoise be placed in a moist chamber, and a weak, interrupted current be sent through it, it will in time begin to beat and continue to do so after the stimulus is removed.

I take it that the infecting power which protoplasm of one kind has over the same or even different kinds seen in disease has its correlative in health, and that this plays a great part in the causation of the heart-beat.

Nerve is but specially modified protoplasm, and the axis cylinder is, at all events, of such a nature that its state in activity, however we conceive of that, has power to initiate or modify another condition of protoplasm in a muscle. It has been shown that in the sartorius of the frog there are two areas, one at each end, to which no nerve fibres are distributed, yet these ends contract with the rest of the muscle. Such a result is in harmony with the view I offer as to the power one protoplasmic unit has to originate in other protoplasmic units a similar condition.

Again, Roy has shown that the changes in calibre of the capillaries cannot be explained by changes of blood-pressure alone. No nervous elements have ever been found in them. Why, then, do they contract? By virtue of influences either from the lymph direct, acting chemically, or owing to altering conditions in the surrounding tissues. Here, again, one kind of protoplasm influences another by contiguity, if we may so speak. Each capillary cell is a representative in some sense of the Amœba changing under its varying environment.

The question of *spontaneous rhythm* seems to me to throw much light on the principal problem of this paper. I have carefully studied this subject in the Terrapin, the Sea-turtle (three species), the Fish and Menobranchus. In one fish of great vitality I found a remarkable power of spontaneous rhythm in every part of the heart when isolated by ligature. As regards the Chelonians, there are marked variations in different species and even individuals, but in none was there in the ventricle a very marked capacity for pulsation independent of intra-cardiac pressure, feeding or other stimulus. I am satisfied that Gaskell's statements give a highly exaggerated notion of this whole matter. But what was very striking throughout was the fact that an extremely weak stimulus sufficed to cause pulsation in parts of the heart thus isolated; and this throws much light upon the causation of the heart-beat.

Reviewing the case, which can be but inadequately discussed in one paper, it will appear that there must be various factors entering into the causation of the heart-beat in the case of the more complex hearts of higher vertebrates.

As before intimated, the cardiac physiology for mammals is yet to be worked out along the new lines; but for reasons before given, it is likely we shall find the same factors entering into the causation of the beat. In the case of each genus of animals, one or other of the factors may be more or less prominent, as has been shown.

In the light of our present knowledge, perhaps some such statement of the case as follows may be provisionally accepted:

(1.) The factors entering into the causation of the heart-beat of all vertebrates as yet examined are : (*a*) a tendency to spontaneous contraction of the muscle cells composing the heart; (*b*) intra-cardiac pressure ; (*c*) condition of nutrition as determined directly by the blood and indirectly by the nervous supply of the organ.

(2.) The tendency to spontaneous contraction of muscle cells is most marked in the oldest parts of the heart ancestrally considered. I have shown (*Jour. of Anat. and Phys.*; Vol. XXI) that in the Sea-turtle the last segments of the ventricle to pulsate are on its extreme right; while the right auricle outlasts the left and the sinus and great veins beat much longer still. The same has been noticed in several other groups of animals. The most recently acquired parts of the heart always are the first to lose functional activity. These are but extensions of Harvey's observations, seen in the light of evolution.

(3) In all hearts examined, intra-cardiac pressure is a factor of considerable importance; in some, as that of the Fish, Menobranchus, etc., it is apparently the controlling factor. The same may be said of the molluscan heart.

(4) The power one contracting cell when in action seems to possess of initiating a similar state in others is of great significance.

(5) The influence of the nerves of the heart appear more and more as we ascend the animal scale. They seem only indirectly concerned in the causation of the beat by their influence over nutritive processes; but as the heart is being so frequently modified in its action, their influence in highly developed hearts becomes an almost constant factor, and of a degree of importance which our knowledge of the relation of nerve to muscle enables us but inadequately to appreciate, but which the pathological changes ensuing on nerve section illustrate.

(6) It almost follows from the above that one part of the

heart having contracted the other parts must follow. This is probably the explanation of the rapid onset of the ventricular after the auricular systole in the mammal. It will be remembered, too, that even in the mammal contraction begins in the great veins entering the heart.

The basis of all these explanations is found, in reality, in the *natural contractility of protoplasm*. A heart in its most developed condition still retains, so to speak, the inherited but modified Amœba in its every cell.

It seems likely to be shown that in the causation of the beat of the mammalian heart all the above-mentioned factors enter.

In conclusion, I would express my conviction that our present explanations of heart disease are of too mechanical a character; the nervous and the other factors indicated should more largely enter into the reckoning in the cardiac pathology of the immediate future.

POST-PARTUM PELVIC ABSCESS.

By T. Johnson Alloway, M.D.,
Gynæcologist to the Montreal Dispensary.

Case I.—*Large Pelvic Abscess opened by lumbar incision in front of Quadratus Lumborum muscle.*—The subject of the following interesting case was a lady 22 years of age, and of very fine physique. Two months prior to her first confinement her husband confided to me the fact of his having contracted an attack of gonorrhœa some short time previously, and that he was afraid he had conveyed the disease to his wife. She had at this time a profuse vaginal discharge, with some evidences of acute inflammation. Vaginal injections were recommended, as the patient would not permit local applications to be made. She was confined in May 1884 with forceps under chloroform. Sublimate vaginal irrigations were used up to the tenth day. On the fifteenth day she had a chill followed by an attack of pelvic inflammation which lasted five days and then subsided, leaving no after ill effects. This looked exceedingly like as if the vaginal washings kept the gonorrhœal disease in abeyance, and on being discontinued absorption of ptomaines generated by the so-called gonococcus took place. At the delivery it was noticed she had a somewhat contracted pelvis, the conjugate diameter being a little below the average. The baby in a few days showed symptoms of a very violent purulent ophthalmia of both eyes. The nurse, mother, a lady friend visiting at the house, and her baby some six months of age, also became attacked in a minor degree with ophthalmia. In fact, every one within reach except the delinquent husband himself.

I was again engaged to confine this lady, January, 1886, and shortly before the expected time her husband again became anxious as to his condition. He stated he had either a renewal of the old gonorrhœa or a fresh attack. He certainly had a profuse discharge with symptoms of subacute disease, and he was strongly under the impression that his wife had again contracted the disease from him. During her confinement she was in labor for twelve hours without making much progress. It was a vertex presentation, with occiput to the rear. The cervix was freely dilatable, but the head would not engage. The forceps was now applied, and after about twenty-five minutes' careful traction the head descended, was allowed to rotate forwards, and delivery completed without injury to the perineum. There was some free hemorrhage for a few minutes from a left lateral laceration of the cervix, but it soon ceased. During the following twelve hours she was well, and it was not until the sixteenth hour after labor had been completed that she began to feel a change. She now experienced a severe chill, headache, fever, and severe pain in the left inguino-ovarian region. It is necessary here to bear in mind that there were no vaginal injections given as yet, the patient not having been visited since the completion of labor. Knowing, however, the probability of her passages containing germs of infection, I felt somewhat disappointed that I did not use *almost* constant irrigation from the first. Vaginal examination now discovered nothing worthy of note beyond the left cervical laceration, which extended apparently into the parametric tissue at base of the broad ligament. A hypodermic of morphia (gr. ⅓) was given at once, hot linseed poultices to abdomen, and hot vaginal irrigations of very weak sublimate solutions to be repeated every two hours. These irrigations were continued until the following day, when plain hot water was substituted, given every hour, and the sublimate every night and morning. During the following few days, the pain in left region became so intense and unremitting that she had to be kept under the influence of large doses of morphia. This pain would especially become severe when the bladder filled, some relief being obtained, however, when emptied with the catheter. Vaginal examination at the end of the third day gave evidence of the pelvic cellular tissue of left side becoming rapidly filled with exudate. The left broad ligament and that side of uterus were fixed, the left fornix was obliterated, and the pelvic floor of that side had descended and was rigid, hot and tender. The corresponding parts of the right side were free from exudation, freely moveable, and painless to pressure. This condition was very interesting from a point of the etiology. External or bimanual palpation discovered a hard, tender ridge felt deeply in the left iliac fossa, but was some distance at this time from the surface. It seemed to be in a line with and directly over the middle part of the ileo-pectineal line. The only internal treatment the patient received up to this stage was one drop of tincture of aconite every hour to relieve high temperature. This state of affairs continued fairly constant until the tenth day, when, coincident with a profuse vaginal discharge of very fœtid pus, all pain disappeared, temperature came down to 100°F., and morphia was discontinued. This discharge evidently came from the cellular tissue of the left side of pelvis, the site of the original phlegmon, and had discharged itself through the laceration of cervix before referred to. At 10 P.M. of the eleventh day she was seized with very sharp pain in *right* iliac region, requiring gr. $\frac{1}{2}$ of morphia hypodermically. Temperature and pulse now ran up again, and fearing that there might be septic matter in the uterus, it was washed out with sublimate solution and iodoform suppositories introduced. Hot vaginal irrigations were again resorted to, and repeated every hour. Morphia in large doses to relieve pain. An occasional dose of quinine (gr. xx) to relieve very high temperature, and hot poultices to abdomen. On the following day vaginal examination gave evidence of the right side of pelvis having become infiltrated; it assuming the same physical conditions as the left at beginning of disease. On the sixteenth day of disease there occurred a distinct series of chills following closely upon each other, and which seemed to annoy the patient very much all of that day. On close examination, the hard mass before mentioned in each iliac fossa was still there, that on the left side was more diffused, softer, and fluctuating. There was also noticed a tumor about the size of half an orange situated over the anterior fibres of the latissimus dorsi muscle of the left side where they leave the crest of the ilium. This tumor was soft and fluctuating, and by palpation a continuous wave could be obtained between it and the formation in the corresponding iliac fossa, establishing its nature beyond a doubt. On the following day Dr. Shepherd saw the case with me and under ether an incision several inches long was made downwards, beginning one inch above the crest of the ilium at the edge of erector spinæ muscle, going through the superficial structures and lumbar fascia in front of the quadratus lumborum muscle. When the abscess cavity was reached by a grooved director and the finger, an enormous quantity of the most fœtid pus imaginable welled out. Pressure now being brought to bear upon the collection in the iliac fossa, thick creamy pus in great volume was forced both from the vagina and the opening in the loin. This pressure was continued until we had expressed over two pints. The parts were now sponged, and a half-inch rubber drainage-tube eight inches in length was passed down into the pelvis through the lumbar opening, and fixed there by suture. (*Fig.* 1.) The wound was then dressed with subli-

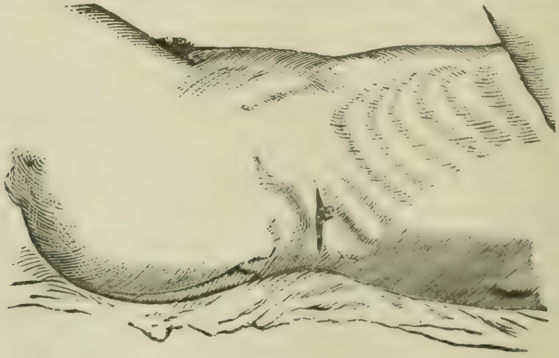

FIG. 1.—Showing position of incision and drainage tube.

mate jute and iodoform. On the following day, pain and fever were much reduced and the patient felt fairly comfortable. On the fifth day following the operation the drainage-tube was removed, but it soon became evident that pus again began to collect. The tube was therefore reinserted a few days afterwards, somewhat shortened. Suddenly the patient was seized with very severe pain in the region of left hip-joint. The parts over the trochanter were exceedingly sensitive to pressure, and it was thought necessary to cut down and examine them. A negative result was obtained, the tissues being found quite normal. The incision, however, had the effect of relieving the pain which did not afterwards return. All went well during the next few days and the patient complained only of severe neuralgic pain down left thigh and an inability to straighten the leg, it having become flexed across the opposite thigh and rigidly fixed there as she lay on her right side. She was very much emaciated and altogether presented a miserable appearance. On the eleventh day after the operation she again experienced a chill and elevation of temperature to 102°F., with corresponding increase of pulse. To explore the abscess cavity in the pelvis through the vaginal opening seemed now indicated, as it seemed probable there might be some burrowing pus-pockets in the cellular tissue which could not obtain proper drainage. Under ether, and with extreme care, a long uterine probe was passed through the vaginal opening forward and upwards until, unopposed, it entered into what appeared to be the abdominal cavity to a point somewhere about 3½ inches above the pubic bone. The point of the probe could be made to travel about freely in any direction desired directly under the abdominal wall, and could be followed by the examining finger outside. The sound was now withdrawn, and must confess I felt somewhat uncertain for a few moments as to where the sound had been moving about so freely. On consideration however, we concluded that the instrument had passed up *behind* the peritoneum, which had been dissected from the wall of the pelvis by the abscess, and that the point of the sound in this way easily approached the anterior wall of the abdomen without entering the peritoneal cavity. Considerable discharge of purulent matter followed this probing, and the result was so satisfactory that the patient continued to convalesce rapidly. Her troubles, however, did not seem as yet at an end. When walking about her room a few days after being out of bed she was seized with acute agonizing pain in her left wrist-joint and arm. I found the hand and wrist much swollen and painful. She had her arm resting in a sling. She was feverish, and had a rapid pulse. There was no assignable cause, such as cold, and I was therefore forced to fall back on that of septicity, probably of a gonorrhœal nature. She was placed on gr. x salicylic acid every two hours, and was, after several other joints had become affected, well in ten days. Probably it was rheumatism.

A point of interest in the foregoing case is—What was the immediate cause of so sudden and extensive an attack of parametritis? It certainly was not due to any act of indiscretion on the part of the patient, as she was most carefully watched. Traumatism plays an important part in the cause of acute pelvic inflammation in this class of patients. The enormous strain which is brought to bear upon the uterine ligaments and structures forming the pelvic floor generally, during labor especially instrumental, must cause rupture of muscular and other structure with extravasation of blood, followed by inflammation of cellular tissue and abscess. This sequence of events would more easily and rapidly take place if laceration of cervical tissue also occurred, and there was a direct infection of the injured tissues from without, as in this case, of a gonorrhœal poison. I last saw and carefully examined this patient four months after her recovery, and though the parts are all adherent to the left side of the pelvis and the laceration shows considerable ectropion, she did not complain of pain nor illness in any way. In time the parts may loosen somewhat through a partial re-development of the cellular tissue, when I will repair the cervix before hypertrophic changes set in in it.*

Through the courtesy of Dr. F. J. Shepherd I have been able to embody the following two interesting cases in this paper, reported by Dr. H. S. Birkett, house surgeon, Montreal General Hospital:—

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* A curious incident occurred shortly after the recovery of this patient. The nurse brought me the little girl, aged two years, of the patient, saying that she had a discharge from vagina which was making the child ill. I found a profuse purulent vaginitis. The nurse stated that the child must have taken it from the chamber or from clothing used by the mother.

Case II.—M. F., aged 20, single, admitted to the General Hospital, 11th May, '86, complaining of pains and swelling in the lower part of abdomen. Two months previous to admission was confined, and gave birth to a full-termed child. Two days after confinement patient got up, and soon complained of severe sharp pain in lower part of abdomen, attended with a small swelling in the right side of that region. Immediately took to bed, when the symptoms became less severe, but with each attempt to rise from bed to attend to her duties the symptoms returned, and became aggravated. *Previous history:* Always enjoyed good health; menstruated at 14 years, menses regular and not excessive; has suffered from leucorrhœa for many months. At present, complains of severe, sharp and non-continuous pain in right iliac region, and extending down thigh, aggravated by movement, and often so severe as to prevent sleep. *Examination:* Patient is of average height, well nourished, though anæmic; pulse 86, regular and of small volume; respiration 18; temperature 99°F. In the right iliac fossa a somewhat oval-shaped swelling is found, being about 1½ inches by 1 inch, is tender and very painful, non-fluctuating, skin moves freely over it. By vaginal examination, this swelling is also easily made out. Linseed poultices were applied, and morphia given as required. By 2nd July the swelling had much increased, being then 3 × 2½ inches, very tender, hot and fluctuating. The temperature for the last week ranged from 100° to 102° at night, and from 98½° to 99½° in the morning. On the 5th July, patient being etherized, the swelling was aspirated by Dr. Shepherd, and gave evidence of pus being present. The abdominal wall was carefully incised over the swelling and the abscess cavity freely opened, which gave exit to about ℥iv of white, creamy pus. Thorough examination showed that the cavity was quite localized in the right iliac region. A medium-sized drainage-tube was introduced, properly secured, and the edges of the wound brought together by catgut sutures. Dressings of iodoform, gauze and pad of sublimate jute were applied. Two days after the operation the dressings were removed and found to be soiled with slight oozing; no purulent discharge; tube was shortened and dry dressings reapplied. Patient sleeps better; pain and tenderness lessened; pulse 80, good volume; temperature 99½°. On the 14th the dressings were removed and found to be slightly soiled by small amount of sweet pus; sutures and tube removed, and dry dressings reapplied; temperature 98½° to 99°. On the 26th, the wound was completely healed; no abdominal pain nor tenderness; sleeps and eats well; general condition much improved, and patient has been up for the last three days. On the 2nd of August patient was discharged, feeling remarkably well and strong.

Cate III.—A. H., aged 31, married, admitted to the General Hospital, 7th July, 1886, complaining of pain and swelling in the right iliac region. Six weeks ago patient passed through a severe and tedious confinement, which was followed the next day by severe pain in the right iliac region. The patient recovered from her confinement, though the pain has never left her, but has continued to grow worse, and was much aggravated by walking. The pain was sharp and intermittent in character. Patient was very thirsty, perspired freely at night, had anorexia, tongue coated, and bowels constipated. On admission patient complained of sharp and intermittent pain in right iliac region, aggravated by movement, and severe enough to prevent sleep. Had anorexia, night sweats, tongue coated with white fur, great thirst, and bowels constipated. Pulse 100, regular, and small in volume; respirations 22; temperature, 100° in the day-time and 103° at night. Examination: Small and somewhat emaciated woman; hectic flush over both malars; skin hot and moist. In right iliac region is a visible swelling, which is somewhat oval in shape, 3 inches by 2 inches, hard, non-fluctuating, hot, and excessively tender and painful. Per vaginam, the swelling cannot be felt; but vaginal roof is somewhat flattened. No leucorrhœal discharge is present. On 10th July, patient being etherized, the swelling was aspirated, and giving evidence of the presence of pus, it was freely incised to the extent of two inches.

This immediately gave exit to about four ounces of yellow creamy pus. The tissues about were found to be much thickened by inflammatory changes, and the cavity was quite localized in the right iliac region. The cavity was well irrigated with solution of bichloride (1–1500) ; medium-sized drainage-tube introduced ; edges of wound brought together by catgut interrupted sutures, iodoform gauze, and bichloride jute pad applied to the wound. On the 12th, the wound was again dressed ; only small amount of laudable pus soiled inner layer of dressings. Sutures removed, edges being well united ; tube shortened, and dry dressings reapplied. Temperature 99° to 99½° ; pulse 80 to 90. On the 19th, wound was again dressed ; no discharge ; wound closing in ; tube left out ; dry dressings reapplied. Temperature 98½° to 99° ; pulse 80. Sleeps well ; appetite improved ; no night sweats ; allowed to sit up. On 5th August patient was discharged ; wound completely healed ; suffers no pain ; sleeps well ; appetite good ; bowels regular ; has gained much in weight and strength.

Pelvic abscess following labor is an exceedingly unfortunate occurrence, and unless in the hands of a special surgeon, is a very unsatisfactory and difficult condition to treat. I have known a number of cases in which the abscess opened into the vagina at the site of a laceration of the cervix. But from the difficulty of having complete and uninterrupted drainage obtained through a small, imperfect and gradually cicatrizing outlet, the intrapelvic collection continued to burrow and increase over and above what escaped now and then in small gushes. The collection then, as the disease becomes chronic, makes its way in the majority of cases towards Poupart's ligament, and probably still further upwards behind the peritoneum into the loin in the region of the kidney and colon. Again, there are cases where a laceration of cervix is followed by infection of tissues and abscess, and still no drainage takes place through the vagina. The pus in this case being first noticed appearing at Poupart's ligament ; and instead of pursuing the course of the cellular tissue upward, as before spoken of, it bursts close to Poupart's ligament, or follows the course of the round ligament through the inguinal canal, and endeavors to completely discharge itself through the opening thus made, But it invariably fails here, as it does in the vagina. A large interligamentous abscess and a long sinus with branches becomes established, lined with a pyogenic membrane leading up to a small, contracted and cicatrizing opening, which will go on discharging a bland pus for an indefinite period of time. A case of this nature has most opportunely presented itself to me within the last few days. The following few notes will give some idea of its nature :—

Mrs. ——, aged 21, married four years ; has had two children, youngest eleven months. At this last confinement she was about twenty-four hours in labor. Forceps was not used, but states she lost a very large quantity of blood. She suffered severe pain, almost directly after delivery, in her left side and left iliac region. She had severe rigors on the fourth day, followed by headache and fever. Two weeks after delivery she noticed a "lump" in left iliac fossa, which became gradually soft and red, and was now constantly troubled with chilly sensations and night sweats. She remained unable to leave her bed for two months after delivery, her chief reason for not attempting to do so being a feeling of intense exhaustion, which was not recognized as a most constant and important sign of a form of chronic septicæmia always seen in these cases. Five months after delivery the abscess in left groin discharged itself through an opening in the skin, and has been active ever since.

Vaginal examination.—Cervix lacerated on left side up to the fornix vaginæ. Right side of cervix normal. Uterus is freely moveable and in normal position. On left side of pelvis there is a hard, solid tumor about the size of a large orange. It is freely moveable, and quite separate from uterus, which can be pushed away from it towards the right side of pelvis. It is not very painful, just a little tender on pressure. Vaginal pressure, with combined palpation of the other hand outside, causes a most profuse discharge of bland pus to run down the genito-crural notch of that side. No fluctuation apparent. Further examination of pelvic organs gave negative result. On examining the left groin, a small opening, giving passage to smallest size silver probe, was found situated about midway between the anterior superior spine of ilium and spine of pubis, close to the edge of Poupart's ligament. The probe passes forwards and downwards (dorsal decubitus) for about three inches, but in no other direction, terminating apparently in a *cul-de-sac.* (*Fig.* 2.) During the primary examination no other passage could be found which would lead towards the large mass felt in the pelvis per vaginam. Aided by Dr. Shepherd and Dr. John A. MacDonald, on the 29th November this sinus was slit up on a director and found at first to be nothing more than a sinus admitting the little finger and ending abruptly in a blind pouch situated deeply beneath the abdominal muscles. Being convinced that there must be an outlet to discharge from the deep pelvis, and carefully running a very fine silver probe along the floor of this sinus, it suddenly slipped into a pit, and following it up with the little finger, broke at once into the main pus cavity which was interligamentous, and was the hard *non-fluctuating* mass so distinctly felt by bimanual palpation. Over a pint of bland pus mixed with blood-debris escaped. The finger now introduced could feel the intestines through the thin peritoneum (posterior face of broad ligament), but could not reach the

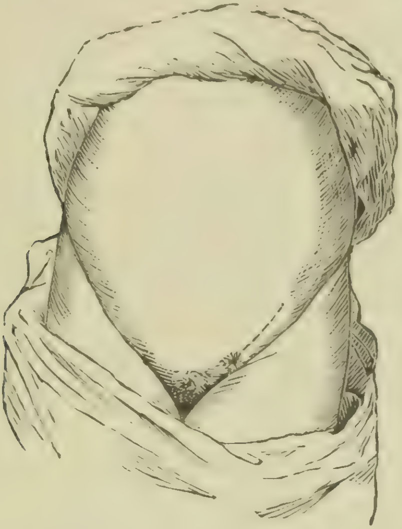

FIG. 2.—Showing position of fistulous opening and direction of sinus before operation.

bottom or opposite walls so large was the cavity; probably as large as a child's head. Passing the left hand fingers now into the vagina the hard mass felt but a few minutes before had disappeared and in its place was found a soft, freely-moveable fornix vaginæ. The cavity was now filled with iodoform gauze and the outside wound dressed with sublimated jute and the patient placed in bed. The cavity was treated in this way for five days, when it began to close. A small drainage-tube was occasionally inserted for a period of twenty-four hours and replaced by the strip of iodoform gauze. It would not have been safe to have used a rubber drainage-tube here continuously, as the external iliac artery could be felt pulsating along the floor of the opening and the tube would therefore rest directly upon it. On the 13th of December (fourteen days after operation) the wound was discharging only a thin serum and it was allowed to close. The wound was completely healed in a few days afterwards and the patient perfectly well. I will repair the lacerated cervix about one month hence.

It was very tempting to make a counter opening in this case into the vagina and drain the cavity by means of a T-shaped tube. Experience, however, teaches that it is much better to drain through the abdominal incision and avoid communication with the vagina if possible. An interesting feature in this case was the inability to obtain fluctuation by the bimanual method. This is a feature constantly proven in these deep-seated interligamentous abscesses, and its absence, therefore, does not prove the tumor to be solid.

The extreme rarity of pelvic abscesses bursting unaided through the skin forms an interesting point in this case.

I believe a very large majority of these cases of pelvic abscess are of gonorrhœal origin, and the remainder septicæmic and traumatic with effusions of blood. I speak here only of post-partum cases, non-puerperal cases being chiefly due to suppurating hæmatoceles und suppurating cysts of various kinds. If we will bear in mind the frequent occurrence of laceration of the cervix and of severe instrumental labors, and the infrequency of pelvic abscess, I think the correctness of this assumption will become apparent.

The all-important considerations in the treatment of a pelvic abscess, especially if acute, consists in avoidance of delay in opening it. Unless an abscess is superficial, and points directly into the vagina, it is better not to open into this passage. An incision from without is attended with much better results under antiseptic precautions.* Dr. Imlach of Liverpool states that he has succeeded in following the round ligament with a glass drainage-tube and tapped an abscess in this way. For these abscesses to open into the bowel or rectum is a calamity. A common reason for post-partum abscesses opening into the vagina rests in the fact that they are so frequently connected with a laceration of the cervix and parametric tissue, in their history. These torn tissues become inflamed from the irritation of constant contact with infective matter, and consequently do not heal before abscess formation takes place. In this fact also lies a powerful proof of the necessity for vaginal irrigation immediately after labor and throughout the puerperium with weak sublimate solutions. In connecting lacerated cervices and pelvic abscesses as cause and effect, we have strong evidence of the support of such a theory in the well-established fact that the cervix lesion and the abscess are invariably on the same side, and both occur chiefly in primiparæ.

Under such circumstances, the remarkably large quantity of pus the pelvis will contain, its intense fœtor, the little constitutional disturbance the patient experiences, and the universal freedom from general peritonitis, is very remarkable. So long as the parietal side only of the peritoneum be exposed to the filthiest of pus all is safe, but one drop escaping on the visceral side, *without drainage*, fatal peritonitis is rapidly developed.

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* Pacific Medical and Surgical Journal, Febraary 1886, page 75.

CARDIAC COMPLICATIONS IN THE RHEUMATISM OF CHILDHOOD.

By R. W. Bruce Smith, M.D., C.M., Seaforth, Ont.

(*Read before the Canadian Medical Association, at Quebec, August,* 1886.)

The opinions of our best authorities vary greatly as to the frequency and extent to which rheumatism may exist in the years of childhood. While some older, but perhaps no more important, diseases are being diligently studied in the light of bacteria and micrococci, it may be profitable to call attention to a well-known affection in which no bacillus has been found, but which, nevertheless, is continually and too often hopelessly crippling children for life in such an insidious form as to be constantly overlooked. Some of our oldest writers in medical literature thought that rheumatism was seldom or ever met with before puberty, but more recent authorities acknowledge its existence at earlier periods, but do not refer with sufficient clearness to the frequency with which we meet with the disease in general practice. Jacobi, Meigs, Pepper and J. Lewis Smith have lately in their more recent works argued that rheumatism is frequently met with in children, and deserves careful attention, not only on account of its frequency and peculiarities, but also on account of its marked tendency to cardiac complications and of its recently established relations to chorea. Smith says that rheumatism was formerly supposed to be rare in children, but more accurate observations show that it is scarcely less common during childhood than in adult life ; it is frequently overlooked, especially under the age of six or eight years. Dr. Howard of Montreal, in his excellent article on acute rheumatism in Pepper's "System of Medicine," states that acute articular rheumatism is *par excellence* an affection of early adult life, although no age is entirely exempt. Most authors, however, while of the opinion that youth and early adult life are the periods most frequently attacked, are not inclined to consider the affection as comparatively very frequent during childhood. Yet I believe that if any general practitioner in Canada will carefully review the cases that have come under his observation, he will find a large number of these cases were those of children who had not attained puberty. About five years ago a well-marked case of acute rheumatism in a child of five years drew my attention to this subject, and since that time I have kept careful notes of all cases of rheumatism occurring in children in my practice. I have to-day the notes of seventeen well-marked cases occurring at different ages, the youngest being not quite two years of age, and the ages of the others covering all the years of childhood. I believe Henoch furnishes us with the record of acute rheumatism in an infant of ten months, complicated with broncho-pneumonia. Senator states that Wiederhofer observed the disease in a baby twenty-three days old, and Stäger met with it in an infant four weeks old. The large number of cases seen in a clinic devoted to diseases of children has no doubt furnished these men with facilities for observation not enjoyed by those of us who labor in the field of general practice. My youngest case, as I have said, was in a child 23 months old. In this case, the first symptom calling for attention in a previously very healthy child was the swollen and inflamed condition of one of the ankle-joints; next day the knee became involved. The appearance of the joint was exactly like that observed in the case of adults. In this case, as in my other cases under six years of age, there was no cardiac complications. The family lived in a low and imperfectly drained part of the country, and surrounded by all the influences of a malarial region. The mother of the child has been frequently, during the past three years, treated for subacute rheumatism. Recovery took place in eight days. I have the notes of the other cases, but will not dwell on these at present, but hasten to deal more directly with the subject of the paper.

The absorbing interest in connection with the study of the rheumatism of childhood relates to the heart. As to why the heart is affected in children more often than in adults I have so far failed to find a clear and satisfactory explanation. The noduli, Jacobi's narrowness of the aorta, and other anatomical points of difference between the child's and the adult's heart have disappeared before the age at which rheumatism is frequent. Vernay has found that of twenty-two cases between the ages of 14 and 20, only one escaped endocarditis. D'Espine and Picot found in forty-seven cases of rheumatism in children only ten cases in which the sounds of the heart was perfectly normal. According to Senator, the younger the patient the greater the risk of the heart becoming affected, as this organ is implicated in fully one-third of all the cases occurring before puberty. In the cases, the notes to which I have previously referred, although, fortunately, I have failed to detect any cardiac lesion in such a large proportion of the cases as the foregoing, I have in the seventeen cases found six with organic valvular disease of the heart, four of the cases had distinct mitral regurgitant murmur, in one case the murmurs were double aortic, and one case presented all the symptoms of endocarditis. I believe, however, that we often have slight attacks of endocarditis in children recovering from rheumatism. There may not be sufficient exudation to produce a bruit, and the palpitation and wandering pains over the cardiac region are allowed to pass without notice. In the case of endocarditis to which I referred, the heart sounds were normal until the acute symptoms had subsided, and the lad was brought to my office the following week complaining of pain over the heart. The loud systolic murmur at the apex led to a diagnosis of acute endocarditis. This lad has enjoyed the best of nursing and the bruit is disappearing, and the strength and health of the patient warrants me in the opinion that within a year the heart's sounds will be nearly, if not perfectly, normal.

Acute endocarditis in children certainly causes less local and constitutional disturbances than in adults, and on this account is much more likely to be overlooked. In those cases in which I found valvular disease, the cardiac lesions in all four cases came on after repeated attacks of rheumatism. It appeared as if the heart finally succumbed unable to resist repeated attacks, just as one joint after another will yield to the disease. In one little girl, the rheumatism had evidently been troubling her for some time—with pains in the ankles and knees on exertion. She was, however, compelled to walk to school, a distance of two miles, being told by her parents that those were only "growing pains." Two months afterwards, I was hastily summoned one evening, and found the child suffering greatly from dyspnœa. Death from heart failure and œdema of the lungs relieved this patient after a few weeks' suffering. Frequently we find chorea associated with the rheumatism of childhood, and in treating these cases the practitioner is often forced to conclude that there is a striking analogy between these two diseases.

From the light of my own limited experience, I must state that I am convinced that there is often an intimate relation between these two affections. Probably the same morbid condition predisposes to both rheumatism and chorea in children, and they may, indeed, be but manifestations of the same affection. Soltman, in his article on Chorea, quotes Ringer, who thinks that chorea and rheumatic affections of the joints, and heart affections, are members of one and the same pathological condition. Often the chorea is primary and the heart affection secondary, or *vice versâ*, or the heart affection and chorea appear at the same time. Again, the chorea may appear first, then the rheumatism, and, lastly, the heart affection ; but, generally, the rheumatism is first, next the chorea, and the heart affection afterwards. In several of my cases I have found a connection with chorea, but the chorea always followed some short time after the rheumatism. I am convinced that rheumatic children are extremely liable to develop chorea. During the past year I have had under my care a case of a child, aged seven years, suffering from chorea, asociated with mitral disease. The father of this girl is a clergyman, who, about nine years ago, had a very severe attack of acute articular rheumatism, which has left him with an irregular heart action sufficient to give in the most unmistakeable manner a loud murmur at the apex, indicating the incompetency of the mitral valve to perform its function. Three years after birth this child developed suddenly symptoms of acute rheumatism, but the attack was only a slight one, and she was better in a few days. Two weeks after this, the characteristic twitchings of chorea were noticed, and the child was taken to a physician, who detected a mitral lesion associated with well-marked chorea. Rest and appropriate treatment did much for this child, and the chorea disappeared, but returned each year during the wet, damp weather of April. Examination would always reveal slight irregularity in the heart's action. For four successive springs the chorea returned, and each year during the attack of chorea the heart symptoms would, as you would naturally suppose, be much aggravated. In April of this year the child was brought to me in a much worse condition than I had previously seen her. At times the dyspnœa was most distressing, and this, with the dropsical condition of the patient, indicated that her sufferings were nearly over. The choreic movements still continued, and the little one was in the greatest distress. There was at that time slight abatement in the symptoms, but they seemed to return again after a few days with redoubled force, until death relieved the little sufferer during the last week in May. In this case we notice a father who had suffered from a severe attack of acute rheumatism; its appearance in the form of a slight attack when the child was three years old, and this followed by chorea associated with the mitral disease.

Within the past few weeks I had a case of chorea in a boy of eight years, in which I looked upon the chorea as a nervous manifestation of the rheumatism, and treated it with excellent results from repeated doses of salicylate of soda.

I know that it would be most erroneous to suppose that rheumatism is the cause of all chorea, but I am firmly of the opinion that there are oftentimes, as I have said, intimate relations between the two affections.

The cause of the rheumatism of childhood may, I think, most reasonably be ascribed to their improper care in diet and dress. The acid theory itself explains the rheumatism of children. The two principal sources of the collection of acid in the system are (1) lactic acid fermentation of certain kinds of food within the intestinal tract and (2) the formation of sarco-lactic and ethylene-lactic acids in muscular tissues as a result of their functional activity. As a matter of fact, most rheumatic children are imperfectly fed either in quantity or quality, and suffer from acid dyspepsia; also, the action of the skin, the principal emunctory of lactic acid, is checked by cold from insufficient clothing. While the truth of this theory *may not have been proven*, it affords to us the most satisfactory working basis for treatment. Lactic acid appears to be very readily found in early life from indigestion and during the first dentition, and results, according to good observers, in the production of rachitis, the incipient stage of which is extremely common. It is not unreasonable to suppose that the same irritant produces the fugitive pains of rheumatism in older children.

A few words as to treatment of these cases. The greatest importance is to check the first tendency we notice to an appearance of rheumatism in a child. Inquire whether there is any hereditary tendency to the disease. All forms of indigestion and acid fermentation of food must be prevented. The condition of the skin with reference to warmth and normal activity must receive the needful attention. I always commence medicinal treatment by administering a small dose of common Rochelle salts, followed by soda salicylate sometimes combined with oil of wintergreen. The greatest precaution must be shown in examining the heart, and if there is any evidence of a bruit, the most absolute and continuous rest in a horizontal position must be enjoined. In this way, and in this way alone, a permanent and fatal mischief may be avoided. We cannot put this fact too strongly to the parents of the child. *Absolute rest must be taken*, otherwise degeneration of the heart-muscle, dilatation of its cavity, and crippling of the valves will be most likely to ensue. Goodhart asserts with commendable pertinence and force that "it is not too much to insist upon prolonged rest when the future of a just-opening life depends upon it. The surgeon treating a diseased joint makes light of a year of rest; yet who has not seen a child after acute pericarditis skipping about at the end of a month or six weeks as if nothing had been amiss." There is evidence that if the heart can be rested for several months in every possible way, permanent lesions may sometimes be averted after the endocarditis of children. And even when valvular disease is apparently confirmed in children, vigorous measures should be made to curtail and, if possible, overcome the difficulty. In addition to the most careful hygienic oversight, the child should be put upon a prolonged course of iron and cod-liver oil, and occasionally I have had very good results from digitalis combined with small doses of nux vomica. Under this treatment, I have no hesitation in saying that more than once I have had distinct cardiac murmurs entirely lost sight of in children. It is certainly reasonable to expect that with healthy growth and nutrition a slight exudation on the valves may disappear. These cases, I will admit, demand the greatest patience on the part of the attending physician, but I believe the results in many cases will justify and reward all the care and perseverence we can expend upon them.

SECONDARY SUTURE OF THE ULNAR NERVE, WITH RAPID RESTORATION OF SENSATION.

By Francis J. Shepherd, M.D..
Surgeon to the Montreal General Hospital.

Suture of nerves after division, though done by Arnemann in 1826 and Flourens in 1828, has never been performed extensively till within the last few years. Primary suture of the divided ends of nerves is a proceeding which commends itself to every surgeon, but secondary suture has not been so popular, and up to the end of 1885 only some half-dozen cases had been reported in America. In these cases where the wound has long closed, the divided ends of the nerve undergo degeneration, and are generally imbedded in cicatricial tissue. The proximal end is generally bulbous and the distal much atrophied ; both ends are often so degenerated that no nerve structure can be found in them. The divided ends are sometimes separated by a long interval, the upper portion of the nerve retracting, and it is often very difficult to bring them together. It was formerly thought that to get union it was necessary to cut the terminal portions of the nerve till healthy nerve tissue was reached ; this proceeding, of course, increased the distance between the divided ends and the difficulty of bringing them together. It is, however, now conclusively proved that a mere joining of the freshened ends is all that is needed for purposes of union. Where the divided ends of the nerve cannot be brought into contact, strands of catgut, or fresh nerve tissue from amputated limbs, have been introduced into the interval between the ends of the nerves, and perfect restoration of function has followed. The sooner the operation of secondary suture is performed after the perfect healing of the original wound the better, but good results have been obtained months and years after the division of the nerve. Mr. Jessop sutured the ulnar nerve with partial success nine years after its division.

Many cases of apparent failure turn out well. Mr. Holmes (*Lancet*, June, 1883) reports a case where the function of the nerve was not completely restored for more than a year after operation. Sensation generally returns before motion, but occasionally the opposite is the rule. In some cases, where sensation was good in the course of a week, motion was not restored for six months. It has been asserted by those who oppose the suture of nerves months after the closure of the wound that the nerves will recover their functions if left to themselves. That they do so in some cases, says Mr. Holmes, is certain, and he gives cases to prove it, but he remarks that such a favorable issue is highly dubious, especially when the distance between the divided ends is great and the proximal end terminates in a bulbous enlargement.

With regard to the method of suturing the nerves, experiments have been made on animals by Rawa, Falkenheim and others. Rawa, in his cases, made the nerve ends overlap, and held them together by an encircling ligature ; physiological union took place at end of six to twenty months. Falkenheim united nerves by the direct and indirect method ; in the former the suture is passed through the trunk of the nerve, and in the latter the sheaths only of the divided nerves are united. The indirect was found by him to be preferable. It is now the opinion of surgeons that it matters little how the divided ends are held so long as the raw surfaces are firmly secured in close apposition. Horse-hair, fine catgut and silk have been used as sutures, and the ends of the nerves have been cut in various ways—oblique, transverse, etc. It is important that after operation the newly united nerve should be subject to as little tension as possible, and that the union of the wound should be by first intention, for if suppuration takes place the nerve may again become imbedded in cicatricial tissue. The following case of suture of the ulnar nerve is interesting because of the rapidity with which sensation returned :—

John D., aged 50, in the beginning of April, 1885, whilst working at Lake Nepissing, was cut with an axe over the left elbow, between the olecranon process and the internal condyle. The wound healed rapidly, but he found that afterwards he could not use his arm, and that there was considerable pain in the elbow. He entered the Montreal General Hospital for treatment June 23rd, 1885, some ten weeks after the injury, and then presented the following conditions: Left arm was semiflexed and fixed; on attempting to straighten it the man complained of great pain in the elbow and resisted the movement; the muscles on the ulnar side of arm and hand were wasted, and the little finger and ring finger bent and useless; no sensation in the little and ring fingers and other parts supplied by ulnar, and, in fact, arm was useless and painful; could not separate his fingers. On examining the elbow, a scar two inches long was seen stretching across the space between the olecranon and internal condyle. This cicatrix was excessively tender on pressure. The diagnosis of division of the ulnar nerve was easily made, and next day (June 24th) an operation was performed for the purpose of uniting the divided ends. An incision was made in the line of the ulnar nerve and across the scar, and the nerve reached. The upper end, which was bulbous, was easily discovered and dissected out from the cicatricial tissue in which it was imbedded; half an inch lower down was found the other end, much atrophied, and also imbedded in scar tissue. After dissecting out the divided ends, they were freshened and brought together with a continuous suture of fine catgut, the wound sewed up and dressed with iodoform and dry dressing, a small drain inserted at the lower end, and the arm was put up in the extended position in an anterior splint. Next day when patient was seen he had a tingling feeling in the little and ring fingers, and general and tactile sensibility was good. The wound was first dressed on the sixth day and the tube was removed; union by first intention, except where drainage tube had been. It was firmly healed on July 8th, and gentle movement was commenced in the arm. The sensation was good, but motion was deficient. As his wound was healed he was allowed to go home, with a promise that he would write and let me know how he progressed. He was told that it would probably be some months before he recovered the use of his arm.

Not hearing from him, my house surgeon, Dr. Eberts, wrote in January, 1886, and received a reply from Nepissing saying he was fast recovering the use of his arm, and that he had gone back to his work ; and the only complaint he had was a slight burning pain in his little finger. Since then I have endeavored to hear from him, but cannot find out his whereabouts, he having left Nepissing some months ago.

The rapid restoration of sensibility in this case is the interesting feature. Surmay (*Archives Gén. de Médecine*, Oct. '85,) reports a case where general and tactile sensibility were restored in twenty-four hours after resection of three-quarters of an inch of the median nerve, and the complete restoration of the other functions occurred after six months.

NOTE.—In May, 1884, Dr. Roddick of Montreal sutured the sciatic nerve in a young man seventeen months after its division. The immediate result of the operation was the healing of two troublesome ulcers on the foot. Sensation did not return for some time, and motion is not yet completely restored, but he is still improving, and can now walk about without a stick. The interest in this case lies in the rapid restoration of the nerves of nutrition, whilst those of sensation and motion more slowly resumed their functions.

A POSSIBLE CASE OF SUPERFŒTATION.

BY G. E. GOODING, M.D., BARBADOES, W.I.

On Feb. 2nd, 1885, I was called about 10 P.M. to visit a negro-woman. On reaching the cabin where she lived about two hours later, I received the following history : She had borne two children previously, and thirty-three hours before my visit had given birth to a healthy male child weighing seven pounds, and in all respects perfectly developed. The labor had been short and easy, the placenta coming away naturally a few minutes after the birth of the child, and the accompanying hemorrhage being very slight. The midwife in attendance, after the child was born, noticed that the abdomen still continued unnaturally large ; but as the woman seemed quite comfortable she determined to leave things alone, regarding the swelling as a tumor, The relations of the woman, however, becoming alarmed at the unusual state of things, decided to seek medical advice, and so I was summoned to her. Up to the time of my visit there had been an entire absence of after pains, and she seemed quite comfortable, sleeping and taking her nourishment well, and working about in bed with a freedom which to a European would be extremely hazardous, but which seems quite natural among the blacks.

On external examination, the abdomen was found enlarged to about the size of a woman at full term, and fœtal heart sounds could be faintly detected about an inch below and to the left of the umbilicus. The mother's temperature was 98.5°, and pulse 78. On vaginal examination, the os was felt dilated to about the size of a fifty-cent piece, and through it, but not protruding, the membranes could be felt. The head was made out to be the presenting part. The look of astonishment and incredulity with which mother and nurse received the intelligence that there was another child yet to come was truly amusing. Not relishing the idea of remaining in the hovel any longer than I could help, I determined to expedite matters by rupturing the membranes. This had the desired effect of bringing on the pains, and the second child was born in about an hour and a half. The placenta quickly followed, and was quite distinct, showing no sign of connection with that of the previous birth. This child, a girl, was a marked contrast to the first, weighing only three pounds and a half, barely half as much. The body was covered all over with fine down, and the nails were very soft, the tips scarcely projecting. It had the appearance altogether of a child about the seventh month of gestation. Some minutes elapsed before it could be got to breathe well, artificial respiration meanwhile having to be resorted to. In spite of all efforts to save it, the child died on the following day. The mother made an excellent recovery, and the first child is now alive and well. I subsequently made an examination of the mother regarding the possibility of a double uterus, but with negative results.

It would have been very interesting to have allowed matters to take their own course, and to have seen how long the birth of the second child would have been delayed. Unfortunately, the circumstances of the case scarcely admitted this, as the woman lived several miles away. Judging, however, from the condition of the mother when first seen, I think the birth might have been put off for an indefinitely long period.

This instance raises the vexed question of superfœtation, and to my mind goes far to prove it in its widest sense. The fact of the children being each invested with distinct membranes and placentæ, as well as the difference in their sex, shows plainly that two ova were impregnated; while the marked difference in the stages of development of the children, and the length of time which elapsed before the birth of the second (which delay, but for interference, gave promise of being indefinitely prolonged), point suggestively to the impregnations having taken place at periods of time considerably distant from one another.

AN IMPROVED NASAL TRACTION SNARE AND ÉCRASEUR, A NASAL SPUD OR DENUDER.

By George W. Major, B.A., M.D., &c.,
Specialist to the Department for Diseases of the Nose and Throat, Montreal General Hospital; Instructor in Laryngology and Diseases of the Throat, McGill University, Montreal, Canada.

The instrument represented in the accompanying woodcut was introduced into Germany by the writer during the past summer as a modification of Krause's "Modificirter Polypen-Schlingenschnürer."* If we deprive the instrument, as illustrated, of the grooved wheel or pulley (*a*), the milled nut (*b*), and the threaded shank, we have a sufficiently accurate sketch of the traction snare on which as a basis the writer's improvements were founded. It will thus be seen that the fundamental instrument *minus* the additions enumerated is a convenient form of Wilde's original, with the exception that a rigid steel wire loop-drawer has been substituted for the long double length of wire usually employed. This contrivance ("die Drahtstange welche die Schlinge tragt") which the writer has retained, has for its object the prevention of rotation of the loop of wire when in the act of adjustment to the growth. The instrument as proposed by the writer may be briefly described as consisting of a straight removable canula, a closely-threaded steel shank, which is traversed by a broad milled nut (*b*) capable of pushing backwards the sliding piece to which the finger-rings are attached. The steel shank, which is flattened on its under surface, terminates at its proximal end in a vertical thumb-ring, while the upper extremity develops a broad shoulder, in the centre of which is inserted the grooved wheel or pulley (*a*), before referred to, and over which the "Drahtstange" or double wire, as the case may be, freely plays.

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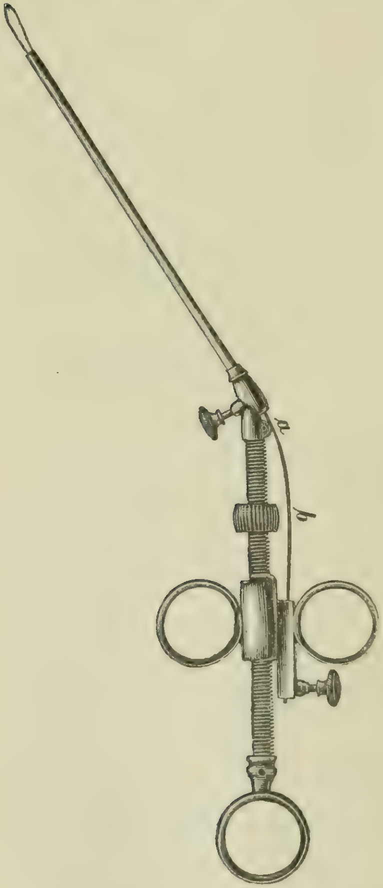
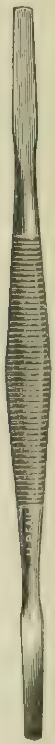
* "Monatsschrift fur Ohrenheilkunde sowie fur Nasen, &c., &c.", No. 4, 1885.





This "Drahtstange" is flattened at its distal termination and perforated by four openings for the attachment of a short loop of wire. The proximal end, after passing over the pulley and nut and piercing the oblong metal block which surmounts the sliding piece, is secured to the latter by the set screw, as shown in the drawing. The writer has added a bulbous or pyriform end to the "Drahtstange," as used in his modified écraseur-snare to prevent more perfectly, slipping from its fixed point of attachment.

Before the additions above referred to became practicable, several minor alterations were necessary, as, for instance, the shifting of the set screw behind instead of in front of the upper finger-ring as formerly, the prolonging of the sliding piece forwards, and the fixing of the thumb-ring in a vertical position.

The changes specified have converted a finger-traction-snare into a combination instrument that can be used for either traction or écrasement, or for both purposes combined, without impairment of the function of either.

The grooved wheel or pulley (*a*), applied for the first time in the history of snares by the writer,* strengthens the instrument at its point of greatest weakness, and increases its power without a proportionate expenditure of force by reducing friction to a minimum.

The broad milled nut travelling over the closely-threaded shank, holds in its embrace six circles of threading, increasing thereby its strength and power by the equal distribution of the pressure over a great extent of surface.

The application of the power in a direction parallel to the axis of the shank prevents jambing of the sliding piece, which latter tendency is further diminished by the lengthening of the piece itself.

The sliding piece rides over the shank freely and easily, and is secured in a vertical position by a flat steel spring applied between the under and flat surface of the shank and the corresponding side of the sliding piece, thus obviating a certain amount of attrition that would otherwise interfere with the harmonious working of the parts.

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* "Medical Press and Circular," London, Eng., Sept. 8th, 1886, and London "Lancet." Dec. 4th, 1886.

This snare affords a clear pull of two inches, far more than is at any time likely to be required. The shank, milled nut, sliding piece and rings are substantially constructed of good steel, and are capable of bearing any strain they are likely to be subjected to.

This snare is available either as a traction snare or as an écraseur. If used with the former end in view, the grip on the pedicle of the tumor may be materially augmented by a few turns of the milled nut, rendering the tendency of the loop to slip downwards during traction much less ; or the position of the sliding piece may be simply fixed thereby. When employed for écrasement, the loop may first be drawn home by traction on the finger-rings, and the milled nut be subsequently relied on for cutting purposes by rotation, first with the fingers and afterwards by pliers if necessary. The position of the nut, well in advance of the finger-rings, renders the use of the pliers easy of accomplishment.

Continued use of this instrument in actual practice has suggested some further means of increasing its usefulness and efficiency. Canulæ adapted for the posterior nares and larynx have been applied, as also a straight canula with a flattened distal extremity, as used by Hartmann (Berlin) for preventing rotation of the loop when the instrument is armed with the long wire, for which latter purpose the maker has been instructed to affix a special cleat. The milled nut has been made octagonal on its upper border for the application of a small steel wrench, if preferred to pliers.

This instrument is specially adapted to the purposes of the general practitioner for the following reasons ;

The angular disposition of the shank keeps the hand of the operator out of the line of vision. This angle is capable of being further increased without interfering with the efficiency of the instrument, as the pulley will obviate the otherwise consequent loss of power.

The "Drahtstange" also, as already stated, prevents the possible rotation of the loop of wire to a very considerable extent. This latter difficulty is not often likely to occur in the practice of a skilful manipulator, and for this reason the writer, who personally prefers the long wire loop, decided upon applying additional means for the adjustment of the latter. As may readily be conceived, the loop formed by a long wire is more graceful and gradual in curve and more pliable in nature than that formed by a shorter length, and, moreover, has the advantage of being capable of being paid out if the size of the body of the growth should demand it.

When a good quality of wire, as Taylor's music wire, is employed, very little trouble from rotation may be looked for. The instrument is sufficiently strong and its traction power equal to cutting through the attachment of any ordinary nasal growth without resorting to écrasement.

THE NASAL SPUD OR DENUDER is a convenient form of instrument for denuding the bony or cartilaginous surface of the nasal septum. One end is straight, while the other is curved on its flat surface, enabling the surgeon to work round an angle, a matter of some importance in operations for the correction of deflections. The absence of some such appliance has often been felt by the writer, and has resulted in the form as shown above. This simple contrivance will be found extremely useful for applying medicated or antiseptic dressings to wounds in narrowed channels where an ordinary probe will not enter. The ends of this denuder may be obtained fish-tailed if preferred.

The originals of the foregoing instruments were made from drawings and specifications furnished by the writer and under his personal supervision by H. Pfau, Dorotheen Strasse 67, Berlin, during last summer.

Mr. W. F. Ford, of Messrs. Caswell, Hazard & Co., manufacturers of surgical instruments, etc., Fifth avenue, New York, is prepared to supply them with all recent alterations and additions.

Reviews and Notices of Books.

Lehrbuch der Speciellen Pathologie und Therapie der Inneren Krankheiten.

Für Studirende und Aertze.—Von Dr. Adolf Strümpell, Professor und Director der Medicinischen Poliklinik, Universität Leipzig. Zweiter Band. Erster Theil. Krankheiten des Nervensystems. Mit 48 Abbildungen. Dritte verbesserte und vermehrte auflage. Leipzig: Verlag von F. C. W. Vogel.

Prof. Strümpell, lately appointed director of the medical clinic in the University of Erlangen, is well known as one of the ablest of modern German physicians. His System of Medicine, of which the work under review is the first part of the second volume, occupies the same place in Germany at the present day as did the great work of Niemeyer ten or fifteen years ago. There is a great similarity in the writings of Niemeyer and Strümpell. They are equally characterized by their philosophic depth and scientific character. Although Strümpell is essentially a general physician, his chief work up to the present has been in Neurology. We owe to him in a great measure our present knowledge of the importance and frequency of inflammatory changes in the peripheral nerves. It is only within very recent times that we have been able to separate multiple neuritis from poliomyelitis, and still more recently has our knowledge been obtained of the important part played by alcohol, when taken continuously and immoderately, in causing changes in the peripheral nervous system. Formerly these cases were described as spinal paraplegia. We now know that the great majority of them are due to multiple neuritis.

Prof. Strümpell has published observations showing that there is a primary combined "system disease" of the spinal cord, where the pyramidal columns (both lateral and anterior), the cerebellar tracts and the columns of Goll (postero-internal fibres of the posterior columns) degenerate. The degeneration commences in the pyramidal columns and involves them principally. The significance and import of these changes are not as yet fully understood. Elsewhere, in the present number of this Journal, we make reference to Strumpell's publications in relation to the essential causes of tabes dorsalis.

The volume under consideration opens with a description of the diseases of the sensory nerves. The account of the different varieties of neuralgia is full, clear and scientific. Following the diseases of the sensory nerves, we have those of the motor nerves, and the vaso-motor and trophic neuroses. The description of the different diseases of the spinal cord is very full and accurate, as far as our present knowledge of them goes. The author accepts the view first advanced by Westphal, that Landry's acute ascending paralysis is essentially an acute infectious disease, having for its local lesion changes in the motor parts of the nervous system. Reference is made to a case where Baumgarten found in the spinal cord bacilli closely resembling those found in splenic fever. The diseases of the medulla and cerebrum are described with that thoroughness which is characteristic of all Strümpell's work.

The concluding part deals with those diseases of the nervous system which have no definite pathology or anatomical substratum, such as epilepsy, chorea, tetanus, tetany, hysteria, Thomsen's disease, etc.

Electrolysis, its Theoretical Consideration and its Therapeutical and Surgical Applications.—By

ROBERT AMORY, A.M., M.D., Member of the Massachusetts Medical Society; Fellow of the American Academy of Arts and Sciences; Fellow of the American Academy of Medicine, etc., etc. Octavo, 314 pages. Illustrated by nearly 100 fine wood engravings. Supplied only to subscribers for "Wood's Library of Standard Medical Authors," for 1886 (12 vols., price $15.00), of which this is Vol. VIII. New York: Wm. Wood & Co.

The application of electrolysis to the treatment of various diseases has recently been so much extended and improved that the publishers of "Wood's Library of Standard Medical Authors" have done good service to the profession in issuing a work which up to the time of its publication well represents our knowledge of this subject. Dr. Amory is evidently well qualified for the important task assigned him. Recognizing the fact that it is principally owing to the lack of a sound knowledge of the principles of electricity in general and of electrolysis in particular that so few practitioners use this powerful therapeutical agent, the author gives a very full and accurate description of this difficult but essential subject. The use of electrolysis in various diseases is discussed. Only a short reference is made to its use in stricture of the urethra. Here electrolysis promises to be of the greatest service. Since the introduction of the absolute galvanometers we are able to measure the resistance so accurately that there is no danger of doing any injury to the mucous membrane. Previously electrolysis was, in stricture of the urethra, a very dangerous procedure. Newman of New York was the first to show that the change to be brought about in stricture must be a gradual alteration of tissue, and not of total destruction by the galvano-cautery. The use of electrolysis in nævi, goitre, and hypertrichosis and other diseases is fully described and illustrated.

A Manual of Dietetics.—By J. MILNER FOTHERGILL, M.D., Edin., Physician to the City of London Hospital for Diseases of the Chest (Victoria Park), &c., &c. New York: Wm. Wood & Co.

Dr. Fothergill is one of the greatest book-makers we have in the medical profession. He writes works that are, however, not only entertaining, but useful. The present one is eminently useful. Considering the great importance to the profession of a sound knowledge of this subject, it is surprising how little has been done to make the knowledge that we possess of it common property. With the exception of Pavy's work, which is now old, there is no work in the English language to which a practitioner can go for information. Dr. Fothergill has brought his work on a level with our present advanced knowledge of the physiology of digestion. After describing the various forms of food and the manner of their digestion, he proceeds to discuss the methods of preparing the different forms of food. Condiments, stimulants; fluid, preserved and canned foods, and the use of artificial digestive agents, are dealt with in the author's well known racy style. The second portion of the volume is taken up with the consideration of the foods best suited for different ages and in certain diseases. The chapter devoted to "Food in Phthisis" will especially repay careful and thoughtful perusal.

Massage as a Mode of Treatment.—By WM. MURRELL, M.D., F.R.C.P., Lecturer on Pharmacology and Therapeutics at the Westminster Hospital; Examiner in Materia Medica in the University of Edinburgh and to the Royal College of Physicians of London. London: H. K. Lewis.

In a cheap, neat and handy volume, we are told all that is probably worth knowing of the usefulness of massage as a mode of treatment.

Books and Pamphlets Received.

HOW TO TREAT WOUNDS TO-DAY. By Robert T. Morris, M.D. Second edition. New York and London, G. P. Putnam's Sons.

A MANUAL OF OBSTETRICS. By A. F. A. King, A.M., M.D. Third edition. Philadelphia, Lea Brothers & Co.

OUTLINES OF THE PATHOLOGY AND TREATMENT OF SYPHILIS AND ALLIED VENEREAL DISEASES. By Hermann von Zeissl, M.D. Second edition, revised by Maximilian von Zeissl, M.D. Authorized edition, translated, with notes, by H. Raphael, M.D. New York, D. Appleton & Co.

TRANSACTIONS OF THE AMERICAN SURGICAL ASSOCIATION. Vol. IV. Edited by J. Ewing Mears, M D. Philadelphia, P. Blakiston, Son & Co.

A MANUAL OF PRACTICAL THERAPEUTICS. By Edward John Waring, C.I.E., M.D., B.S., Lond. Fourth edition. Philadelphia, P. Blakiston, Son & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, Oct. 22nd, 1886—Concluded.

J. C. Cameron, M.D., President, in the Chair.

Aortic Aneurism.—The President called on Dr. M. C. McGannon of Brockville, who was present, to give the history of an interesting specimen of double aneurism of the arch of the aorta shown by him to the Society.

Dr. McGannon said that the patient was well six months ago. First symptoms were those of a severe bronchitis. Resonance was complete on both sides, but absence of breathing on right side. Patient at that time had no pain, temperature and pulse were normal, and heart-sounds slightly accentuated. Later, a pulsation could be discovered to the right of the sternum, temperature went up, and the lungs became consolidated. Patient lost appetite, cough with expectoration increased, but at no time was there any peculiarity of the voice or any signs of pressure, except on the bronchi.

In reply to Dr. Smith, Dr. McGannon stated that the patient died from exhaustion.

Dr. Ross asked if there was any tugging at the trachea perceptible. Dr. McGannon replied in the negative.

Dr. Johnston said that the specimen showed that both aneurisms were of very rapid growth, and in neither was there any signs of lamination in the clot.

PATHOLOGICAL SPECIMENS.

Dr. Gardner exhibited the following pathological specimens obtained during the previous ten days :—

1. *A submucus myoma*, removed by enucleation. The patient was the mother of several children, the last born five years ago, and had suffered from uterine hemorrhage ever since. After dilating the uterus, the capsule was slit up, the tumor grasped with a vulsellum, separated by the finger, and dragged from its bed. The shreds of capsule were trimmed off, the cavity well douched with hot water, and Churchill's iodine freely applied. No drainage or irrigation was practised. Patient made an easy and rapid recovery.

2. *Cystic tumor of the labium.* A cyst of the left labium magus of five years growth and the size of a hen's egg. It was easily enucleated entire. This was probably a degenerated gland of Bartholini.

3. *Extirpation of a cancerous uterus.* A cancerous uterus from a patient aged 49 years. Patient had intense pelvic pain and the other usual symptoms of malignant disease of the uterus. Examination before the operation proved that neither the broad ligament nor the pelvic glands were seriously involved. The removal was performed by the vaginal method. The patient being placed in the lithotomy position, and so retained by Clover's crutch, the uterus was drawn downwards and forwards to the pubes and the vaginal mucous membrane incised all round the cervix. Then the base of each broad ligament was ligatured by transfixion with a curved needle carrying strong silk ; next, the posterior cul-de-sac was opened into the Douglas pouch and the bladder separated completely. The uterus was then retroverted through the posterior cul-de-sac. After this, the broad ligaments in their upper parts were clamped on each side with Terrier's clamps for the purpose, and the amputation of the uterus completed. Some bleeding points were secured, and the operation completed by a T drainage-tube laid in the Douglas pouch. The clamp forceps were removed at the end of three days, and the drainage-tube a day later. The patient recovered without a bad symptom.

4. *Ovarian cystoma.* A multilocular ovarian cystoma removed from a lady of 68 years. In this case, 48 hours after the operation, the patient developed a pleurisy of the right side, which extended to the left two days later. The pulse reached 175 per minute, and was irregular and intermittent. This was promptly checked by 10 min. doses of tincture of digitalis every four hours. No symptoms referable to the operation appeared, the alarming chest complication soon amended, and rapid and complete convalescence took place.

5. *Ovarian cystoma.* A multilocular ovarian cystoma from a young lady of 22. There were some adhesions and troublesome bleeding from a rent in the broad ligament ; as oozing continued after application of a continuous suture, a drainage-tube was used for 48 hours. The second ovary was found cystic and removed. Dr. Gardner remarked that Schröder formerly saved any portion of the second ovary not seriously involved, but of late had discontinued the practice. Dr. Schröder cites a case where pregnancy took place after removal of one ovary and part of the second.

Discussion.—DR. TRENHOLME, referring to Dr. Gardner's method of extirpation of the uterus, stated that his method of procedure usually consisted in retroversion of the uterus and, after ligation, removal of it piece by piece, separating the anterior wall from the bladder with the finger. As the disease returned in two cases this year in his practice after removal of the uterus, he has lost faith in the operation of extirpation of the uterus for malignant disease.

Dr. Kennedy thought that cutting through the posterior cul-de-sac shortened the operation, and that the Terrier's clamp would greatly simplify it. He asked Dr. Gardner for statistics of the operation.

Dr. Gardner, in reply, stated that the mortality after total extirpation of the uterus was not more than 10 to 12 per cent. on the continent, but it was to be remembered that, in France especially, the uterus was frequently removed for other causes, *e.g.*, incurable prolapsus, etc.

Stated Meeting, Nov. 5th, 1886.

J. C. Cameron, M.D., President, in the Chair.

Abscess of the Brain.—Dr. Proudfoot exhibited specimens from a case of abscess of the brain, and gave the following account of the case :—

This patient, female, aged 20, was admitted to the Western Hospital, under Dr. Perrigo, July 4th. At the time of admission she was suffering from intense pain in the head and distressingly loud tinnitus aurium, with discharge of pus from the meatus. There was also constant retching and vomiting, the patient being unable to retain any food upon the stomach. Dr. Perrigo examined the patient, and finding a large polypus blocking the meatus transferred her to my care. The polypus was removed under ether, and the tympanic cavity thoroughly cleansed by a stream of warm water, there being a large perforation of the membrane through which the polypus passed. The polypus was the ordinary mucous variety. The after-treatment consisted in syringing the ear with warm water every two or three hours and a 4-gr. solution of zinc sulph. dropped into the ear ; and as there appeared a slight redness of the skin over the mastoid process, a small bag of ice was kept over that part. There was no vomiting after the removal of the polypus, and on the following day the patient seemed much better and was able to take some food, although the appetite was not good. All redness and tenderness over the mastoid process had entirely disappeared, but the pain in the head was still complained of, though not so severe as at first ; the pain was always referred to the base of the skull on the affected side. There was no irregularity of the pupils, and their mobility was fairly good. The pulse remained about 60 and the temperature never above 100°. The discharge from the meatus was profuse. On the 9th the patient complained of increasing pain in the head, and there was considerable uneasiness. She was put upon potass. bromid. grs. x every four hours, but still appeared to be getting gradually worse, and on the 13th I determined to remove the whole of the mastoid, if necessary, in hopes of giving some relief, although I was convinced from the first time I saw her that the brain had already become affected. She died suddenly at 6 o'clock the following morning. The nurse had syringed her ear and gone from the ward ; when she returned in a short time she found the patient had drawn the bedclothes over her head and died without making the slightest sound. Previous to her admission into the hospital she had been treated by a physician for syphilis, and her breath had the mercurial fœtor. I also found that she had complained of pain in the head and had been unable to retain anything upon her stomach for about two weeks before I saw her. It was therefore more than probable that the abscess of the brain had started before her admission to the hospital. The abscess was a large one, containing a large amount of fœtid pus, and extending from a perforation in the posterior part of the petrous bone, close to the semi-circular canals, right across the lobe of the brain, uutil it finally pressed upon the medulla, accounting for the sudden death of the patient. I am convinced that no surgical procedure would have saved her life.

Dr. Johnston exhibited a specimen of *colloid cancer of the rectum*, which involved the whole circumference of the gut for five inches above the anus. Infiltration most extensive in anterior wall, and involved the prostate gland. Inguinal glands on both sides infiltrated by colloid cancer. Retro-peritoneal glands uninvolved. One small cancerous nodule in lung, and an extensive acute softening tuberculosis.

Dr. Shepherd exhibited a *kidney with tubercular pyelitis ;* also a large *calculus*, extracted with great difficulty from the pelvis of kidney. Weight of calculus 4 ozs. 7 drs. Patient doing well at date, one week after operation.

Dr. Kennedy exhibited the *tubes and ovaries* which he had removed from a patient in the Western Hospital. The woman was 27 years old, and gave the following history : She was married at 18, and shortly afterwards became pregnant ; at the same time had an attack of gonorrhœa. So far as could be ascertained, both conditions were coincident. She miscarried at the fifth month, was very ill and confined to bed for weeks afterwards, and has never been well since. Her husband's death obliged her to follow the occupation of saleswoman, which aggravated the condition. Menstruation became frequent and painful, so that ultimately, at these periods, she was compelled to keep her bed and use narcotics. During the interval the pelvic pain was continuous. After some years she again married, but found sexual intercourse painful. She had for years sought relief, and being advised to try change of climate, had gone to Australia, and lately had come to Canada. About a year ago she applied to Dr. Kennedy, and various remedies were tried in vain. Local examination did not reveal anything positive beyond apparent enlargement of both tubes and extreme sensitiveness of the pelvic organs. As the patient was becoming a confirmed invalid, and the history and symptoms indicated diseased tubes, an operation was suggested and acceded to. On October 9th she was operated on, and the tubes and ovaries removed. The tubes are enlarged, with thickened walls, and perfectly occluded at the free extremity from agglutination of the fimbriæ; cystic degeneration had also commenced in both ovaries. This patient could not possibly have again conceived. No pelvic adhesions were found, the uterus being freely moveable and smaller than normal. The patient progressed favorably, and is now fully convalescent.

DR. WM. GARDNER read a paper entitled "Glimpses of Abdominal Surgery in Europe during the past Summer," which appears at page 257 of the present volume of the JOURNAL.

DR. R. P. HOWARD thought the account of the two cases of laparotomy in puerperal peritonitis of extreme interest. He thought that physicians ought to be far less reluctant than at present in adopting this means of treatment. He also asked for Tait's treatment of peritonitis after operations.

DR. HINGSTON had witnessed recently Keith of Edinburgh operate. His operation contrasted with those mentioned by being a slow one. He divides pedicle by actual cautery, and waits for all oozing to cease. His incision is a free one.

DR. CAMERON wished to know if anyone would, in his opinion, be justified in neglecting antiseptic precautions in operating.

DR. GARDNER, in reply, said that Mr. Tait attributes much of his success to the avoidance of opium, as it tends to bring about adhesions by keeping bowels quiet, and also makes constipation more difficult to overcome. For symptoms we are accustomed to recognize as those of commencing peritonitis, viz., abdominal pain, tympanitis and vomiting, he gives a saline cathartic and turpentine enemata of strength of one teaspoonful to 4 ozs. soap and water. Tait insists on absence of all fluids from the diet for 24 to 36 hours. Muller washes out abdomen in peritonitis with ¾ per cent. solution of common salt. One secret of Tait's success was doubtless the wonderful rapidity of operating and the consequent short anæsthesia, the use of drainage-tube to avoid delay in case of hemorrhage, frequent washing out during operation in case of hemorrhage and to remove the contents of burst cysts, and also to his after-treatment. He did not agree with Tait as regards avoiding the use of the nail-brush and the use of unboiled water.

DR. HINGSTON mentioned that recently, in the case of a burst cyst, he had, from urgency, been compelled to wash out the abdomen freely with common water from the tap. The patient had recovered without a bad symptom.

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, December 2nd, 1886.

THE PRESIDENT, DR. RUTHERFORD, IN THE CHAIR.

(*From our own Correspondent.*)

Rupture of the Heart.—DR. MCKEOUGH related the following history:—A farmer, aged 56, previous to the past summer, had almost perfect health; but for some months subsequent to his death, suffered from low spirits, general malaise, was easily fatigued upon exertion, and complained of some pain in the precardial region, which at times was very severe. Pulse was always accelerated when examined, seldom below 100, and the slightest exertion markedly increased its frequency. An examination of the heart revealed no appreciable enlargement, and no murmurs. After a slight effort on the day of his death, having previously been lying upon a sofa, he complained of severe agony in the region of his heart; his lips, ears, and to a slight degree his face and hands, were observed to become blue, and in less than ten minutes he ceased to breathe. Permission was obtained to examine his chest. On opening the pericardium, it was found full of black semi-fluid clots and blood, and an irregular rupture about three-fourths of an inch in length was noticed upon the anterior surface of the right ventricle, near the apex. The walls of the right ventricle were everywhere thin, at the place of rupture not thicker than blotting paper, soft, and tore easily; the walls of the left ventricle were thicker than normal. The valves were healthy, and there was no evidence of malignant endocarditis. Dr. McK. thought the diseased condition was due to some obstruction in the coronary artery supplying the parts affected.

Poisoning by Ptomaines.—The PRESIDENT reported having recently been called to two cases, man and wife, suffering from symptoms of violent irritant poisoning—pain, vomiting, purging and collapse. Both, however, subsequently recovered. The treatment was morphia and stimulants. They had both eaten freely of head-cheese about an hour before symptoms manifested themselves.

The members of the Society present supposed that the symptoms were due to the development of poisonous alkaloids in the head-cheese. Dr. McKeough was subsequently called to two cases in which symptoms very similar developed after partaking of head-cheese obtained from the same sourceas the President's cases.

Cerebritis—Abscess of Brain.—DR. HALL briefly related the history of a post-mortem held to-day, in which softening of the entire brain, with an abscess in the occipital lobe of the right hemisphere, was found. The patient, a man aged 60, was ill only a few weeks. Symptoms, when first seen, were mental dullness, embarrassment of speech, and uncertainty of gait, with a subnormal temperature. Symptoms of general paralysis, more marked in the lower extremities, soon supervened, and finally somnolency, coma and death closed the scene.

Chronic Constipation.—DR. BACKUS read a paper upon this subject. In relating the numerous causes of chronic constipation, he headed the list with carelessness and neglect. A hurried and imperfect performance of the act of defæcation, necssitating an incomplete emptying of the lower bowel, is mischievous. Change of residence, of occupation, of diet, or an attack of some severe illness, may be the orgin of the disease. Deficient secretion from the mucous membrane of the large intestine, or an excessive drain upon the fluids of the body, as in diabetes, render the fæces hard and less easily moved by the peristaltic action of the bowels. Anæmia and other enfeebled conditions of the system frequently give rise to constipation, etc. The result of continued constipation is often pernicious—the blood is burdened with effete material, mental depression, melancholia, dyspeptic conditions, a sallow complexion, often persistent and severe pains referred to the back, hips, etc., may follow. Sciatica may be due to constipation. Referring to the treatment, Dr. B. divided it into hygienic, dietetic, medicinal and mechanical. Under hygienic, he spoke of exercise, walking and riding, massage of the abdomen and general massage in persons unable to take active exercise, and bathing, as conducive to a permanent cure. Under dietetics, he forbade the excessive use of meat or a too nutritious diet, and advised more vegetables, fruit, and coarse breads. Some people took too little fluids, and a more liberal supply of water frequently relieved them. In the medicinal treatment of these cases, he thought usually a combination of drugs in small doses acted better than a single one. He enumerated succinctly the indications for the more important purgatives. He had found, in some of the most obstinate cases of constipation in children, cod-liver oil act with great satisfaction. He had not found cascara sagrada to be a specific. A pill he found useful in many cases is one containing sulphate of iron, aloes, colocynth, nux vomica and belladonna. Under the last heading he noticed the various enemas and suppositories useful in constipation. In all cases, patients must be urged to solicit a motion of the bowels at the same hour daily ; the persistent practice of this rule would cure the majority of cases.

Discussion.—DR. TYE said many cases were due to general debility, and required general tonic treatment. He did not think it was necessary or natural for every one to have a daily evacuation, but considered it important for the rectum to be kept emptied, and found a pill of aloes and soap a most useful article. Small doses of sulphur was a useful laxative in his experience.

DR. HOLMES endeavored, in treating constipation, to ascertain the cause. If due to neglect, remedy that by proper means. If due to debility of coats of bowels, give nux vomica, electricity and exercise. If there was defective circulation, massage was beneficial. It might be due to some local physical condition, such as fissure of anus. In many cases of constipation, an examination of the rectum was advisable.

The PRESIDENT mentioned a case of peripheral paralysis of left leg cured by an active purgative. Had treated cases successfully by the persistent use of electricity. Had found a simple, but effectual, remedy in an enema of cold water at bedtime. A formula he often resorted to with success was equal parts of bitart. pot., senna, sulphur and ginger ; a teaspoonful two or three times a day as necessary.

CANADA

Medical and Surgical Journal.

MONTREAL, JANUARY, 1887.

HÆMODYNAMICS AND BLOOD-PRESSURE.

The conditions under which the physicist and the physiologist work are so different, the nature of the mechanisms they investigate so radically unlike, that a very dissimilar mental attitude and habit of thought result.

Unless a man has become pretty thoroughly saturated with the conception of the great variability and instability in all parts of living organisms he is not prepared to apply with safety the principles of physics to such organisms. The cases that arise in physiology are so much more complex, so much less susceptible of exact estimation, that solutions mathematically exact must not be expected; and, indeed, from our not knowing or being able in the nature of things to ascertain one or more values required for the solution of certain problems, the final result in some cases must of necessity be only approximative. But even were this not the case, the whole of the physics necessary for such solutions is not yet forthcoming; and the physiologist has often to work out both the physics and the physiology together.

A very long and valuable paper has been recently published by De Jager of Utrecht, in which are embodied the results of his own numerous researches and those of others up to date. He has not relied upon *à priori* reasoning, but has submitted his problems to experimental tests. This renders his results invaluable; for we have come to this ourselves, that we would not be inclined to accept any conclusions of physics in complicated cases in the realm of physiology except when verified by actual experiment, no matter how plain the cases appeared from the physical standpoint. De Jager has investigated the flow of fluids in rigid tubes, in elastic tubes, and finally in the complicated system of elastic tubes of the circulation in the mammal. Space will only permit of a statement of the results without the details of the methods by which they are reached being in general given.

Some standard text-books, as shown by Donders and De Jager, are not free from errors. Thus, it is not true, as represented, that the blood flows from the arteries to the veins *because* of the lower pressure in the latter. They show that the pressure at a point further from the source of flow may be higher than at a nearer point. The difference of pressure is not the cause of the flow, it is " only one of the most constant phenomena,"—but in general, the above case must be an exception, because there are not usually sudden widenings in the vascular system. "*In a wide cylindrical or fusiform aneurism it may, however, very well occur that the pressure is higher there than in the vessel which conveys the blood to it*"; that is to say, the pressure in an aneurismal dilation may be greater than in the stronger part of the vessel on the cardiac side of it. So far as we know, this has never been before pointed to as a factor in the *rupture* of aneurisms.

The chief value to the organism of a system of *elastic* tubes is the diminution of shock from the cardiac pump, and the constancy of the flow; notwithstanding it must be borne in mind that there is an accumulation or storage in the veins during the heart's pause, the consequence of which gathers importance in connection with cardiac disease. Such is, of course, owing to the negative pressure in the large veins during diastole giving way to a reverse condition just after it has ceased. The flow from the veins near the heart is not then absolutely constant.

The importance of the *resistance* in the capillaries is made very clear by an experiment which demonstrated that the blood continued to flow after the heart had ceased fifteen seconds, owing to the tension in the arterial system. Rollett has asserted that the flow may continue in the capillaries for half an hour or more after the heart ceases. In estimating venous pressure, the presence of the valves preventing reflux must be borne in mind; hence on cessation of the heart-beat there remains a positive pressure in the veins. Positive and negative always have reference, of course, to the atmospheric pressure.

The following result is very instructive : Animal tracheotomized, artificial respiration, curare given previously, thorax and abdomen opened, both vago-sympathetic nerves cut, apnœa induced, the *inferior vena cava compressed*, and the blood-pressure registered in the jugular and carotid. It was found that the pressure fell in both. This is owing to the great dilation of the veins on the peripheral side of the compression resulting in putting so much of the venous system out of the circulation. It is equivalent to removing from the vessels in which the blood still circulates a certain quantity of blood. Of course, in an animal in a more normal condition compensation by the heart, alteration of calibre of vessels through the action of the nervous system, and anastomotic flow would take place. It is such compensation that so often surprises the thoughtful physician who sees these results in diseased states,—that is if he has the physiological eye.

The capacity of veins placed low is greater than that of veins placed high ; at any given moment the quantity of blood present *for the moment* will be greater in the former than in the latter. The elevation of an extremity would have little or no influence on the heart and on the blood-current if the blood-vessels were not elastic. Hence we have the explanation of the fact that the hand becomes empty of blood if placed high enough. It is a case of internal pressure being less than the external atmospheric pressure ; and if the vessel walls be thin enough, they are compressed and their lumen even obliterated. Considerations of this kind explain why, when the body is suddenly changed from a horizontal to a vertical position, cerebral anæmia may arise. Hence the bearing on *sudden death* arising from a change of position, especially with greatly weakened heart.

In such cases as those discussed above, leaving the cardiac variations out of account, as a current is flowing through the vessels it is only the *lumen* which has influence on the current. Resistance is the key to the situation in most cases as regards blood-pressure. It will also follow that high arterial pressure will be associated with low venous pressure in many cases.

With regard to the temporary and periodical variations in blood-pressure consequent on respiration, certain considerations are of great moment.

1. The negative pressure in the thorax during inspiration forms but a small subordinate part of the cause affecting the aspiration of the heart (suction-pump action).

2. The capacity of the pulmonary vessels bears an inverse ratio to the systemic arterial pressure—*i.e.*, the greater that capacity the more blood is withdrawn from the systemic vessels and the blood-pressure must be lowered, and *vice versâ.*

3. increase of resistance in the pulmonary vessels causes a fall in the arterial pressure, and *vice versâ.* Blood is withheld from the systemic circulation.

4. An increased resistance in the pulmonary vessels, occasioning a fall in the arterial blood-pressure, must cause a rise in the venous blood-pressure. It is found, experimentally, that the respiratory curves of arterial and venous pressure in the carotid and jugular run counter to each other. But variations in the capacity of the pulmonary vessels exercise the same influence on arterial and venous blood-pressure ; *e.g.*, increase in capacity will effect a fall in both arterial and venous pressure by lessening the tension all over the vascular system.

5. During normal respiration, the capacity is increased and the resistance lessened during inspiration and the reverse during expiration. Exactly the contrary of all this holds for *artificial* respiration.

6. As the results of compression of the abdomen, *per se*, with other interfering factors experimentally removed, it is found that the curve of both jugular and carotid pressure rises. This is owing to the narrowing of the small veins in the abdomen, a lessening of their capacity ; hence a portion of blood is expelled from them, causing a rise in both arterial and venous pressure, as measured in the carotid and jugular respectively. This is De Jager's explanation, but it seems to us capable of another ; in fact, it is just one of those cases that it would be quite impossible to decide independently of experiment.

It seems to us these facts must have an important practical bearing in cases of straining. Owing to the presence of valves in the veins, and the alternating increase and decrease of pressure in abdomen and thorax, the venous blood-current is promoted by respiration.

De Jager has also investigated the influence on blood-pressure of respiration of condensed and of rarefied air. The oscillations in the jugular and carotid run in opposite directions, as in normal respiration.

As the result of a comparison of different methods of respiration, it is emphatically stated that *the normal respiration is the most favorable to the circulation of the blood*, a matter of great practical moment in cases of suspended animation. Distension (*i.e.*, over-stretching) of the lungs must prove injurious. With moderate degrees of condensation or rarefication of the air the effect on the mean blood-pressure is not very marked. When both inspiration and expiration occur in condensed air the mean pressure falls in the arteries and rises in the veins, probably owing to increased resistance in the pulmonary capillaries. When both acts of respiration are performed in rarefied air the reverse effects on the blood-pressure follow—if any change at all takes place. When an animal is made to breathe first condensed and then suddenly rarified air, the mean arterial pressure will on the transition greatly rise and the venous fall. It may be laid down as a general rule that *however we cause the condensed air to act during respiration it will never be favorable, but always detrimental to the blood-current.* If with certain degrees of condensation no effects appear to follow owing to increased *cardiac* action, this expenditure of energy must be taken into account.

These conclusions really follow in great part from what has previously been stated in regard to the general influence of respiration on blood-pressure. That there are *dangers* in the use of condensed air will readily appear. A weak heart and consequent feeble circulation are contra-indications, for diastole is obstructed, not to mention increased strain in systole. But the application of rarefied air may be favorable to the circulation. It should be used during expiration only—it favors the latter, but impedes inspiration. Williams' apparatus is not in harmony with these principles. In Valsalva's experiment there is a large fall in the arterial and a large rise in the venous pressure, owing to obstruction in the lung capillaries from increased intra-pulmonary pressure; little blood is returned to the heart, much kept back in the veins, and the quantity passed on into the arteries is so lessened that the blood-pressure must fall in them while the veins are over-full, giving rise in them to a higher blood-pressure.

It will be borne in mind that the results stated in this paper are founded on experiment; they are facts. It is possible that other explanations may supersede those now offered; though De Jager has devoted himself for years to these studies, and seems to be not only a physiologist but an able physicist. Of course many of these results are not new to science; some are verifications. It must also be borne in mind that in most instances possible compensations are not considered. The subject becomes in such case highly complex.

RECENT STUDIES UPON THE NATURE OF SUPPURATION.

There is no department of pathology in which recent investigations have been so satisfactory or led to such conclusive results as in this one.

We still find in all text-books the statement that suppuration is a stage of inflammation—*i.e.*, that the onset of suppuration records a certain degree of *intensity* in inflammation; yet this view must now be quite altered, since it has been proved with absolute certainty that suppuration indicates, not intensity, but merely the presence of a certain factor among the causes of the inflammation, namely, bacteria, and it has been shown that without their presence no irritant, be it ever so intense, can cause the formation of a single particle of pus.

Bacter [illegible] [illegible] all [illegible]

This view, originally advanced by Lister, and further developed by Hueter, had till now to be accepted with a certain amount of reserve. For though from clinical experience in the success of the modern antiseptic system of treating injuries made it appear probable, yet, experimentally, it lacked complete proof. On the one hand, certain abscesses occur in which no bacteria can be detected; on the other, certain irritants, notably turpentine, croton oil and metallic quicksilver, applied so as to exclude apparently the access of bacteria, still caused suppuration. This latter objection has now been met. G. Klemperer of Berlin recently, by prolonged exposure of the irritants to heat and then application subcutaneously under stringent aseptic (not antiseptic) precautions, injected these irritating bodies in a series of over one hundred experiments without causing any suppuration, thus completing this portion of the evidence. The exudation was always serous or fibrinous, never purulent.

The significance of the absence of bacteria in an abscess is explained by the study of abscess formation. The organisms must have been present, as at an earlier stage the purulent exudation is largely a conservation process, having as its object the annihilation and absorption of the bacteria by the exuded leucocytes. At the same time the question has been studied from another aspect—What bacteria cause suppuration and under what conditions can they bring it about? Modern bacterial methods have given a mathematical precision to these researches. In thousands of abscesses now examined, only about ten species of bacteria have been observed. These are chiefly micrococci, and of these, five species alone cause about nine-tenths of all occurring abscesses. The remaining thousands of bacteria existing in certain parts of the body and in its surroundings are not pyogenic.

With regard to the conditions necessary to enable these few bacteria to cause suppuration, the conditions vary widely; some suffice by their mere presence to set it up, in others a weakened condition of the tissue is necessary. Injected into the blood, for instance, these would be harmless unless the system is injured or irritated at any point, as by the injection of the already mentioned chemical irritants, say into the peritoneum or the seat of a fractured bone. In the first case, a purulent peritonitis (Grawitz), in the latter a suppurative osteomyelitis (Ogston), is the result.

Other local conditions may affect the result, subcutaneously or in the peritoneum the direct injection of pyogenic cocci will cause neither peritonitis nor abscess unless injected in such numbers or diluted to such bulk as to preclude their rapid absorption and assure a prolonged contact with the tissues. This point is of extreme interest, as showing the *rationale* of drainage of wounds.

We have, then, simple inflammation, either serous or fibrinous, and purulent inflammation, two entirely distinct processes, and not simply one process passing gradually into the other. It is very satisfactory to note that the daring, though logical, deductions maintained from the first by Lister and his followers, that there can be no pus without bacteria, have been now fully substantiated. With regard to the chemical processes which bring about the prominent features of pus, especially its fluidity, we are still in the dark as to whether it is caused by the direct influence of the bacteria themselves upon the exudate, or by some product formed in the course of their life processes.

SYPHILIS AS A CAUSE OF TABES DORSALIS.

Ever since Fournier, in 1876, pointed out the frequency of a history of syphilis in cases of tabes dorsalis, the relationship between these two diseases has been a subject to which a great deal of interest has been attached. The attention of the profession was not, however, pointedly directed to this subject until three years later, when Gowers and Erb gave the result of their experience. This was to the effect that in fully 75 per cent. of tabetics a distinct syphilitic history was obtainable. From very numerous observations published since this period, it is plain that any doubt on this intimate relationship must be discarded.

We believe we are safe in saying that there is a distinct history of syphilis in at least 75 per cent. of patients suffering from tabes dorsalis. The reason why the connection between these two diseases has not found more general acceptance is two-fold. First, the lesion in tabes is entirely different from what we find in syphilis. It is a pure degenerative process and what results from such degeneration. There is never found the gummatous, new formations, or the small round cellular infiltrations characteristic of the direct effects of syphilis. Secondly, owing to the negative results of antisyphilitic treatment in tabes, many have concluded that the alleged causal connection is merely a coincidence.

If we are to accept the intimate relationship of these diseases, which is inevitable, in view of the facts before us, it is plain that we must extend our views of the damages that syphilis is capable of producing. In the 19th number of the *Neurologisches Centralblat* for the year 1886, Prof. Strümpell of Erlangen contributes an able paper, which gives a probable clue as to the way in which syphilis brings about degenerative changes in the posterior columns. For a long time it has been known that certain definite nervous troubles follow many of the infectious diseases. The causal connection between the latter and the former is undoubted, although there is no similarity between the induced disease and the original malady. One of the best known examples of this is the nervous troubles that follow diphtheria, often weeks after the complete disappearance of all traces of the latter. These changes have their seat for the most part in certain definite peripheral nerve districts, and are for the most part of a simply degenerative nature. They have no resemblance to the original diphtheritic throat affection. They cannot be the result of the diphtheritic bacillus. Strümpell looks upon them as being produced by some chemical poison which originates from the diphtheritic poison. Accepting this hypothesis, he proceeds to argue that in all probability tabes dorsalis is brought about in a similar way,—it is the result of the development of a chemical poison from the syphilis, which attacks a certain definite area of the nervous system (the posterior columns and the peripheral nerves).

In this comparison between the after-effects of the diphtheritic and syphilitic poisons two objections naturally arise, one being the great difference in time in the two cases. Diphtheritic paresis sets in a few weeks at the longest, while tabes does not show itself after syphilis for many years. Another objection to this analogy is the steady progressive character of the tabetic lesion as compared with the curable changes seen in the nervous system after diphtheria.

In answer to the first objection, it may be urged that syphilis is an extremely chronic disease. How frequent do we find even the direct symptoms of the disease delayed for many years. It is not surprising, then, that the supposed poison to which it gives rise may be many years in forming. In the multiple neuritis which sometimes set in during the course of chronic tuberculosis we have an example of the very slow changes induced by a chronic infectious disease. We also see the same chronicity in leprous neuritis. The second natural objection is easier answered than the first. Peripheral nervous changes tend naturally to recovery, while the opposite is true of central changes. That the generation of some poison (chemical?) is the probable cause of tabes is borne out by the fact that similar changes are induced in the posterior columns by the use of ergot. Degenerative changes occur also in the lateral columns from the use of lathyrus.

It is not at all surprising that antisyphilitic treatment has no influence over tabes dorsalis once the degenerative process is fully established. Such treatment cannot regenerate degenerated nervous tissue. There is, however, good reasons for believing that it can to a certain extent prevent the progressive character of the process. The great point, however, in Strumpell's hypothesis is that it holds out ground for hope that by an early and thorough use of mercury we may be able to prevent tabes. If we can prevent the development of the poison caused by syphilis, then we prevent tabes dorsalis. If Strümpell's apparently very reasonable hypothesis is true, then the above statement is true. It is certainly very refreshing to have even an hypothesis to work on in these, hitherto considered, hopeless cases.

RETENTION OF PLACENTA AFTER ABORTION.

La Semaine Médicale contains an abstract of a paper read by M. P. Budin before the Academy of Medicine, Paris, upon the treatment of retained placenta after abortion. Hæmorrhage and septicæmia are the two chief dangers, and to avoid them many authorities recommend the manual or instrumental removal of the placenta. He considers such a course justifiable only if the following two propositions can be proved:

1. That the retention of the placenta is really a frequent cause of accident.

2. That digital and instrumental interference are free from danger.

In reply to the first, he gives his own statistics at the Charité and Maternité Hospitals. In 210 cases of abortion, the placenta was retained 46 times; slight hæmorrhage occurred in only one case, septic trouble was almost absent, and not a death occurred. He condemns operative interference as unnecessary and often harmful. His plan of treatment is expectant, with rigid antisepsis. In simple cases he uses antiseptic vaginal injections, and waits for the placenta to separate and come away spontaneously. For hæmorrhage, he uses the tampon with antiseptic precautions; for septicæmia, he uses vaginal injections (sublimate 1–2000 or carbolic acid 3 per cent. solution) every two hours, or every hour if necessary. In severer cases, intrauterine antiseptic douching. Internally quinine should be given.

MESMERISM.—For some weeks past a certain travelling "Professor" has been drawing crowded houses in this city by giving exhibitions of so-called mesmerism. Surely, in the light of our present knowledge, such means of drawing money from the ever-credulous multitude should be prevented. It should be illegal to have such public exhibitions. Very few of the gaping and laughing crowd for a moment think that the pleasure they derive from the antics of the victims on the stage may possibly be at the great expense of the latter. The induction of the mesmeric or hypnotic state is a very serious matter, and may do great injury, especially if frequently repeated. In certain diseases of the nervous system its induction may not only be justifiable, but beneficial. To bring it about, however, for the sake of private gain and public amusement is simply scandalous. There is nothing occult or supernatural in the phenomena of hypnotism. They are all, or nearly all, explainable on physiological grounds. What little remains obscure will no doubt be soon made clear with the advances of cerebral physiology.

—Dr. Gunning of Rio Janeiro, the donor of the Jenny Geddes tablet for St. Giles Cathedral in Edinburgh, has made a very handsome gift to the university of the latter city. It takes the form of a scheme of Victoria jubilee prizes in the faculty of medicine. There are eleven prizes of the value of £50 each. Each of these prizes is to recur triennially. The prizes have received names which commemorate previous professors of the

University of Edinburgh. They are as follows: Munro, Gregory, Bell, Forbes, Balfour, Black, Christison, Lister, Thomson, Alison and Simpson. They will be awarded for special essays or graduation theses, or for original research, and are open to graduates of the University of Edinburgh of not more than three years standing.

MEDICAL DINNER.

The annual dinner of the Undergraduates in Medicine of McGill University was held in the Windsor Hotel, on the 2nd of December. Among the guests were: Sir Donald A. Smith, Sir William Dawson, Dr. Anderson (American Consul), Mr. Andrew Robertson (President of the Montreal General Hospital), Richard White, J. S. Hall, M.P.P., Dr. Kennedy (Bishop's College), and Dr. Beers. Representatives of the sister faculties and of the medical schools in Canada were also present.

The chair was ably filled by William Hall, a fourth year student.

After the usual preliminary toasts were disposed of, Dr. Roddick, in a very happy speech, proposed the health of "The Mayor and Corporation." This was responded to by Mr. Richard White, the acting Mayor, in a neat and pointed speech.

"Our University" was proposed by Mr. Lafleur, and responded to by Sir Wm. Dawson. In his usual able manner, the distinguished Principal pointed out the great advantages to medical students of being trained under the influences of a broad university education.

The next toast proposed was that of "Our Benefactors." This agreeable duty was ably performed by Mr. J. G. McCarthy. Sir Donald Smith, in rising to reply, was loudly applauded. He paid a glowing tribute to the general worth and true charity of medical men.

The "Dean and Professors," proposed by Mr. Metcalfe, was responded to by Drs. Palmer Howard, Fenwick, R. L MacDonnell, and J. C. Cameron. The Dean urgently pleaded for the endowment of those chairs, the occupants of which are required to devote their whole energies to their special subjects.

"Our Hospitals," proposed by Mr. Boone, was responded to by Mr. Andrew Robertson, the indefatigable President of the Montreal General Hospital.

The toast of the "Sister Universities and Schools" was responded to by Dr. Kennedy of Bishop's College, Mr. Galloway for the Toronto School of Medicine, Mr. Philp of Trinity School, Mr. Hay of the Royal College, Kingston, Mr. Campbell of Bishop's, and by representatives of Laval and Victoria.

Dr. T. J. Alloway responded to the toast of "Our Graduates." He showed by a careful statistical review how much the graduates of McGill were appreciated throughout all lands where the English language is spoken.

Dr. Geo. Ross, in proposing the "Class of '87," pointed out the advantages students of the present day have compared with those of even a very few years ago. This toast was responded to by Mr. J. A. Dickson.

Dr. Mills, in an able speech, proposed the health of the "Freshmen," which was responded to by Mr. G. M. Campbell.

After three cheers for the "Press" and "Ladies," the most successful dinner ever held by the Undergraduates in Medicine came to an end.

Medical Items.

—Dr. Alleyne Nicholson, Professor of Natural History in the University of Aberdeen, is dead.

—Prof. J. Clark Murray, of McGill University, has been requested to allow his "Handbook on Psychology" to be translated into Polish. The work has been introduced into several colleges in Great Britain and the United States.

—The following are appointed examiners in medicine in the University of Toronto for the year 1887 :—*Physiology and Pathology*, G. A. Tye, M.D. : *Medicine and Therapeutics*, J. J. Cassidy, M.D. ; *Midwifery and Forensic Medicine*, W. Britton, M.D. ; *Anatomy*, D. B. Fraser, M.B. ; *Surgery and Surgical Anatomy*, I H. Cameron, M.B. ; *Clinical Medicine*, J. E. Graham, M.D. ; *Clinical Surgery*, L. Teskey, M.D. ; *Hygiene and Medical Psychology*, T. S. Covernton, M.D.

—Dr. Wm. J. Crittenden, of Unionville, Va., says :—In pneumonitis, pleuritis and bronchitis I have found Papine to answer an excellent purpose. In dysentery it is useful both as an anodyne and in relieving the tenesmus. In the diarrhœa of children I frequently combine with it bismuth subnitrate and prepared chalk. I have used it also in cystitis. In neuralgia, when I wish an anodyne, I use Papine. As an anodyne it is equal if not superior to morphia ; and I have never yet seen any unpleasant effects from its use. As a hypnotic I find it to be an agent of great value. It is inferior to bromidia when we simply wish the effect of a hypnotic. But it fulfills the indications when we wish a decided anodyne as well as a hypnotic influence.

CANADA

MEDICAL & SURGICAL JOURNAL

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Original Communications.

NOTE ON CHEMICAL GALVANO-CAUTERY.

By William Gardner, M.D.,
Gynæcologist to Montreal General Hospital; Professor of Gynæcology, McGill University.

One of the most interesting and instructive experiences I had during the past summer was an afternoon spent with Dr. Apostoli of Paris at his gynæcological clinic. A pupil of Tripier, the doctor is tolerably well known as an earnest and enthusiastic worker with that most powerful and efficacious, but still imperfectly understood, remedial agent, electricity. It may be said with perfect truth that all, or nearly all, we know of electricity in the treatment of the diseases peculiar to women has been worked out by Tripier and Apostoli, but it must be admitted that the pupil now outshines the master. By the kindness of Dr. Apostoli I had ample opportunity to verify the results he claims to obtain in the treatment of uterine myoma by this agent. These results are: arrest of hemorrhage, almost always the most urgent symptom, diminution of pain, and finally reduction of size, varying from one-fifth to one-third of the size of the tumor. So impressed was I that I ordered from M. Gaiffe, through Dr. Apostoli, a set of the necessary appliances, which I expect in a few days, when I hope to begin its employment in a class of cases which often give much anxiety in practice. Shortly after reaching home I received from the doctor a *resumé* of a paper read by him at the last meeting of the French Association for the Advancement of Science, with a request that I should translate it for the CANADA MEDICAL AND SURGICAL JOURNAL. This translation I now offer to the readers of the JOURNAL. It concerns the treatment of a class of cases much more common than myoma.

A New Treatment for Chronic Metritis and Endometritis by Intrauterine Chemical Galvano-Cautery. By Dr. G. APOSTOLI, Paris.

Intra-uterine therapeutics tend more and more, and with much propriety, to replace the old methods of application to the exterior of the uterine cervix. The new procedure which I instituted four years ago for the electrical treatment of fibroma I have employed with the same advantages and equal success in the treatment of chronic metritis, especially when the latter condition complicates endometritis. To a lesion which, before invading the uterine parenchyma, commences in the mucosa and is confined to it for some time before involving the peripheral structures, I oppose a treatment which acts by cauterizing the whole of the more or less diseased mucous membrane ; for the modern methods of curetting, intra-uterine injections, and purely chemical intra-uterine cauterizations, I substitute a galvano-chemical treatment less heroic, easily localized, the dose easily regulated, well borne in all cases, and not liable to be followed by inflammatory reaction, if the remedy be properly applied. The immediate chemical action, which consists in progressive destruction of the mucosa, is soon followed by a process of regression and disintegration, which favors the absorption of exudations and hyperplasia. To properly conduct the operation it is necessary to be furnished with and understand the use of the following electrical appliances:

1. A medical intensity galvanometer, which I first had constructed to indicate 200 milliampères. Only by this appliance may the intensity of current employed be exactly ascertained. The great advantage of this precision over the old method of estimating the intensity by the number of cells is obvious. Thus a new pair of elements is, of course, more active than one in use for some time.

2. A constant current battery of sufficient size of elements to last a long time and not grow weak to any great extent by use,

and which can furnish from, say, 30 cells a current of from 100 to 200 milliampères. The best cabinet battery is certainly the Lechanché; a good portable battery of moderate size is as yet a thing to be desired. Meanwhile the bisulphate of mercury immersion battery meets tolerably well the needs of practice.

3. An intra-uterine electrode sufficiently long for application to the whole length of the uterine cavity of a material such as platinum, which is not acted on by acids and furnished with an insulating tube to protect the vagina; the best material for this purpose is celluloid.

4. A neutral electrode, which, applied to the abdomen, permits of the transmission of a very intense current without pain, heat, or the formation of eschars; the best is wet clay, which I proposed in 1882.

5. Conducting cords sufficiently pliable to be convenient of use and strong enough to prevent any danger of painful interruptions of the current from their being broken.

The physician being in possession of the proper appliances must strictly conform to a technique of operation which may be definitely indicated as follows:

1. A tepid antiseptic vaginal injection should be administered and the woman placed in the dorsal position, the knees drawn up.

2. The battery being brought into action and the galvanometer interposed, the abdominal clay electrode is placed *in situ*, the woman being warned that it is always cold; and the rheophores attached.

3. The intra-uterine electrode, previously warmed and disinfected, is slowly and cautiously introduced, with care that the vagina and vulva are protected by the insulator.

4. The intra-uterine galvano-cautery is to be negative in the hemorrhagic cases and positive in the other cases.

5. The principle which should govern all such intervention is never to surprise the uterus and never to make a too painful application. Now it is important to know that in a certain small proportion of cases (3 to 5 per cent.) the uterus is irritable. Such are certain hysterical subjects who bear the current badly, although of slight intensity, and in such small doses alone must be administered.

6. It is necessary in all cases to begin with a weak current, slowly increased in intensity, and to stop short of producing more than slight pain, to gradually accustom the patient to its effects and so overcome all physical and moral resistance.

7. Gradually in two or three sittings the intensity of the current is to be increased until in the majority of cases 100, 150 and if necessary 200 milliampères have been attained. The intensity is to be proportioned and regulated by the tolerance of the patient and the extent, gravity and duration of the lesion.

8. The duration of the application, from five to ten minutes, must, like the intensity, be regulated by the extent of effects it is desirable to obtain.

9. The sittings may be held weekly or tri-weekly, according to necessity, and the physician must regulate the number and intervals of the applications according to the urgency and necessity for intervention.

10. The patient must be made to rest in all cases several hours after the application. Such rest is necessary for the safety and efficacy of the method.

11. Antiseptic vaginal injections of corrosive sublimate or carbolic acid are to be prescribed for administration morning and evening.

This simple and safe treatment, a true therapeutic hysterometry (veritable hysterometrie therapeutique), is none other than a molecular galvano-chemical curetting, acid or basic, according to the case, which excites the formation of a new mucosa and constitutes a kind of intra-uterine issue, the action of which we may prolong or vary as we please. Its beneficent effects which I have verified in a large number of patients are speedily obtained from the first sittings, become rapidly more marked, and soon lead to a cure. Confinement to bed or any additional treatment is unnecessary. As compared with surgical curetting, it has the advantage that it can be localized and regulated as regards dose or amount, at pleasure, according to the necessities of the case.

EXPLORATION OF THE KIDNEY IN A CASE OF TUBERCULOUS PYELITIS.

By Francis J. Shepherd, M.D.

The following case is of interest, as showing the difficulty of diagnosis in the early stage of tuberculous disease of the kidney. All the symptoms at first were referable to the bladder, and the amount of pus in the urine was small. In many such cases the prominent early symptom is frequent micturition, and this may or may not be accompanied by pain, which, when excessive, may be due to tuberculous deposits in the bladder itself. When the man first came under my notice I considered that the disease was one of the kidneys and not of the bladder, because of the small amount of urea excreted daily and the absence of mucus from the urine. The personal and family history of the patient did not point to tuberculous disease, and the amount of pus was so small that it might easily have originated in the bladder. Careful examination revealed no tumor in the region of the kidney, but there was always discomfort and pain in the left lumbar region. Later on, when pus became more abundant and the amount of urine less, it was evident that there was some destructive disease of the kidney going on, due either to the presence of stone or tubercle. The sudden diminution of the flow of urine showed that both kidneys were inefficient, and it was decided to cut down on the tumor which was now present in the region of the left kidney in the hope of finding a stone which was preventing the ouflow of urine. When the operation was performed the man was in an uræmic condition, and evidently had not long to live.

The operation is instructive, and this lesson is to be learned from it, viz., that no mere external examination of the kidney can satisfactorily determine its condition, and that in every case an incision should be made into the organ and the parts explored with the probe or finger. The aspirator failed to evacuate the contained pus, because it was so thick and tenacious, although a previous exploration had revealed its presence in small amount. In cases of tuberculous pyelitis the disease is often symmetrical, and it would be folly to perform a nephrectomy without a knowledge of the condition of the opposite kidney. Such cases demand a nephrotomy with subsequent drainage until the condition of the other kidney is ascertained. If it is found to be healthy, nephrectomy may be afterwards performed with the object of removing a suppurating organ and ridding the patient of foci of disease. The condition of the other kidney is easily ascertained after a nephrotomy, for all the urine from the incised and drained kidney would come out of the lumbar wound, and that which was passed through the ordinary channel would necessarily come from the other kidney. If the urine is large in amount and of a healthy character, this is partly good proof that the other kidney is performing its functions properly.

For the report of the following case I am indebted to my late house surgeon, Dr. H. S. Birkett :—

S. B., aged 38, was admitted into the Montreal General Hospital on the 13th of July, 1886, complaining of frequent and painful micturition. These symptoms first appeared three months before, and he had been treated by several physicians for catarrh of the bladder. Had always been healthy up to three months ago, and was formerly stout, but had lost considerable flesh lately. He made water every few minutes, night and day, and each time the pain was severe. It commenced in the small of the back, on the left side, and extended down the groin, along the urethra to the point of the penis. He complained of continuous dull, aching pain in the left lumbar region. Had never passed any blood; urine contained a small amount of pus, but no mucus, specific gravity 1.005, contained albumen, and only two grains of urea to the ounce. Quantity passed daily, 60 to 70 ounces. No tumor could be made out in the lumbar regions. Bladder sounded for stone, with negative result. No cough or expectoration, and lungs and heart perfectly normal. From the condition of the urine and general symptoms, Dr. Shepherd concluded that he was suffering from some affection of the kidney. He remained in the hospital some weeks, but left no better than he entered, treatment having no effect whatever.

Dr. Shepherd afterwards attended the man at his own house, and the symptoms still continued as before, viz., frequent and painful micturition, with pus in urine. The quantity of pus in urine now rapidly increased and the urine diminished. He passed 20 to 30 ounces of urine daily, 30 per cent. of which was pus. He also became rapidly emaciated, and there was occasionally an elevation of temperature in the evening. The patient went to some mineral springs in the neighborhood, and was not seen for several weeks, not, in fact, till the latter end of September. He was then much emaciated, and seemed to be in a stupid, drowsy condition. He was passing only 20 ounces of urine daily, and of that 50 per cent. was pus. A tumor could now be distinctly made out in the left lumbar region. It was aspirated, and at first only a little thick pus was drawn off and then thin bloody serum.

He was again admitted into hospital Oct. 11th, 1886, and the day after admission passed only six ounces of urine, from which all pus had disappeared. His condition was serious; he had well marked uræmia, and Dr. Shepherd, thinking that the arrest of urine might be due to a stone blocking the ureter, determined to cut down and explore the kidney, a proceeding which he thought could do no harm and might do good. The horizontal lumbar incision was practiced, beginning posteriorly at the edge of the erector spinæ muscles and extending downwards and outwards below the 12th rib. The kidney was soon reached and found to be enormously enlarged and non-fluctuating. The finger easily went through some tissue to the depth of one inch at the upper end. A large aspirating needle was thrust in several directions into the kidney, but failed to reach either a stone or pus. From the great enlargement and general appearance it was thought a neoplasm existed, and considering that the man was secreting only six ounces of urine daily, the conclusion was arrived at that the other kidney was also diseased, so a drainage-tube was introduced and the wound sewed up. The man recovered from the immediate effects of the operation, but died comatose that night. No post-mortem examination was allowed, but after death the wound in the lumbar region was reopened and the kidney taken out. At the same time the kidney of the other side was searched for, but could not be found; it had probably been affected by a similar disease and had undergone atrophy. On cutting through the greatly enlarged kidney numerous pockets of pus were found and some large cysts distended with serum. The cortical substance was studded with small suppurating points, and was much thickened. Dr. Wyatt Johnston examined the case, and came to the conclusion that it was a tuberculous kidney; tubercle bacilli were found in large numbers.

OBSTETRICAL NOTE—FŒTAL HEART-SOUNDS PROPAGATED THROUGH THE BREECH.

By J. C. Cameron, M.D.

A few days ago a large, strong primipara was confined in the Maternity Hospital, whose case presents some unusual and interesting points. By external examination it was ascertained that the vertex was presenting in the second position. The fœtal heart was heard midway between the right anterior superior spinous process and the umbilicus at the rate of 136 to 144 per minute. A fœtal heart-sound was heard also at the fundus, well over to the left, somewhat weaker and about eight beats less in frequency. Per vaginam, the diagnosis of second position of vertex was confirmed. The observations were verified by several independent observers, but a differential stethoscope not being available, it was impossible to determine positively whether the two fœtal heart-sounds were really synchronous or not. Notwithstanding the double heart-sounds, there was but one fœtus present, and that very large. The causation of this double fœtal heart-sound is interesting and worthy of note. Owing to the position of the child in utero the left side was uppermost, bringing the heart close to the abdominal wall. The fœtal heart-sounds heard were of maximum intensity in the usual situation, and in addition were propagated through the breech to the fundus, high up on the left side. Had the fœtus presented in the first or any other position than the second, this peculiar transmission of the fœtal heart-sounds would not have taken place. The difference in rate was probably due to the uterine contractions, which were frequent and violent.

QUARTERLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

Prepared by Wm. Gardner, M.D.,
Professor of Gynæcology, McGill University; Gynæcologist to the Montreal General Hospital.

Beitrage zur Castrations-frage, Contributions to the question of Castration (*Removal of the Uterine Appendages.*)—In a long paper under this title in the *Archiv f. Gyn.*, Bd. 29, Hft. II, based on twelve operations for myoma and ten for neuroses, Prochownick of Hamburg discusses very fully this operation, than which, perhaps, no subject within the scope of gynæcology has been so much discussed during the past year. Prochownick's contribution is a model of what the reports of such cases ought to be. Every case is fully described in all its features: conditions previous to operation; description of operation; macroscopical and microscopical examination of parts removed; the immediate result of operation; and the condition of the patient several months afterwards. Unfortunately for the prospects for arriving at a correct appreciation of the value of this much-performed operation, some of the operators of large experience furnish us with very meagre or no details on several of the points indicated. In all cases the patients had been previously treated for a time—in some, months or years. It is worthy of note that in nearly all the myoma-cases the appendages were more or less diseased. This has been a very common experience in this operation, and inasmuch as similar morbid conditions of ovaries and tubes have been found when these organs have been removed for intractable uterine hæmorrhage in the absence of myoma uteri, it is beyond a doubt that the condition of the appendages causes hæmorrhage as well as the tumors to which that symptom is so universally credited. Of the myoma cases, seven disappeared, four were much reduced, and one was extirpated. The hæmorrhage, the chief indication for the operation, was stopped in six, much lessened in four, and recurred in one. All but one recovered. The fatal case was from cerebral embolism—a not very rare mode of death in such tumors. In the ten so-called neurotic cases there were, before the operation, evidences of enlarged, sensitive and painful, adherent and otherwise diseased ovaries and tubes, producing varying, sometimes severe, pelvic symptoms, disordering menstruation variously, and accompanied with manifold reflex, nervous and digestive disturbances. Of these, four were cured, three improved, and three not benefited.

The German Society of Physicians and Naturalists held their annual meeting for the past year in the capital. In the gynæcological section many interesting papers were read and specimens exhibited. Czempin, first assistant to August Martin, read a paper on the *Relation of Diseases of the Uterine Appendages to the Uterine Mucosa.* Of diseases of the uterine adnexa, which may induce disease of the uterine mucous membrane, the following were enumerated:—

1. Recurrent, acute or subacute disease of ovaries, tubes, or of both combined.
2. Exudative parametritis.
3. Pelvi-peritonitic irritation from cicatrization of the ligaments after ovariotomy and salpingotomy.
4. Certain tumor-formations of the appendages, particularly pyosalpinx and ovarian sarcoma.

Each of these morbid states may induce those diseases of the uterine mucosa which lead to atypical bleedings, the character of which will to some extent depend on the particular cause. In pyosalpinx, ovarian sarcoma, and certain other diseases of tubes and ovaries, a glandular and interstitial endometritis is set up. In other cases the endometrium undergoes little or no change, but from arterial congestion bleeding is set up.

Hegar, Kaltenbach, Schröder, Martin, Löhlein and others took part in the discussion, and it was pointed out by some of the speakers that the diseases mentioned may exist with few or no symptoms, and that their presence must not always be taken as indication for surgical interference.

Castration for Epilepsy was the subject of a paper by Schramm of Dresden. He said that in comparison with other forms of spasm, castration in epilepsy and hystero-epilepsy yielded less favorable results, but that when epilepsy has a close relation to the menstrual process the operation is a legitimate one and of great value. He adduced two severe cases operated on respectively one year and one and a half years previously, neither of whom had had any fits since the operation.

Schröder read a paper on *Castration for Neuroses.* He said that Hegar very properly drew a distinct line between the removal of diseased ovaries and the removal of these organs with the object of inducing menopause. The indications in the first case are clear and present no difficulties in arriving at a conclusion. The ovaries are removed because they are degenerated, constituting large or small tumors, but other pathological conditions, as chronic oöphoritis, also require operation. It only one ovary be diseased, it alone requires removal, and perhaps under certain circumstances only a part of it. It is quite otherwise when the object is to induce menopause. Then both ovaries must be completely removed, and the object is attained when the organs removed are healthy. He did not agree with Hegar that the appendages are to be removed only when diseased. There is a marked difference in the object to be attained by the operation when it is performed for the removal of diseased ovaries and when done for myoma of the uterus. In the latter case the ovaries, even when healthy, are removed to produce an influence on another diseased organ. In the same way organs, it may be healthy, are removed to get the influence on a general neurosis. The author pointed out that severe neuroses often subside at the menopause, both natural and induced by castration, without any evidences of disease in the ovaries. He had operated in twelve cases for this indication. Three cases after intervals of 8½, 7 and 5 years respectively had given a most favorable result. Two of these had married. The others were too recent to judge of results, which always follow slowly.

Sänger of Leipzig read a paper on *The Technique of Supravaginal Amputation of the Myomatous Uterus.* He described as "intra-peritoneal encapsulation" a procedure he had recently adopted in a case of subserous and intra-ligamentous tumor, with the best results, and which consisted in encircling the pedicle with an elastic ligature left *in situ* and then suturing the parietal peritoneum of both sides to the posterior wall of the stump, which was thereby excluded from the peritoneal cavity. The author strongly recommended the leaving of the elastic ligature, which he had practised in ten cases. In only two cases in which also Thiersch's leaden ring to secure the elastic was employed, both ligature and ring were subsequently expelled through the cervix. The only fatal case was one in which the elastic was removed before closing the abdomen.—(*Archiv f. Gyn.*, Bd. 29, Hft. II.)

Acute Peritonitis ; Operation and Recovery. By John W. Taylor, F.R.C.S., Surgeon to the Birmingham and Midland Hospital for Women.—This is the title of a short paper embodying the report of a case of remarkable interest alike for the accoucheur, general practitioner and surgeon. The patient was confined on Sept. 28, 1886, by forceps. Three days after, pain and tenderness in left iliac region and fever. From this time till the end of October, intermittent feverish attacks with pain as described. Ill-defined resistance on left side of cervix. On November 11th, while lying quietly in bed nursing her child, sudden pain in left side of belly, with vomiting. Pain all night. Dr. Phillips saw her at 12 noon next day and diagnosed escape of matter. A few hours later Mr. Taylor saw her with a view to opening the abdomen. Distension and tenderness of abdomen ; ill-defined, acutely tender swelling behind uterus ; temperature 104°, pulse 140. The diagnosis was rupture of an abscess, causing peritonitis. Operation was advised and consented to. Next morning Mr. Taylor opened the abdomen. Sero-purulent fluid welled up into the incision. The appendages on the left side, together with the intestines, omentum and uterus, were matted together in a mass, in which it was difficult to distinguish the different structures. The omentum and tube were first differentiated, and the Fallopian tube, much thickened and inflamed, was brought to the surface. The corresponding ovary was adherent to the top of the uterus and was carefully separated, when both tube and ovary were withdrawn outside the incision. The ovary contained an abscess which had broken by two small ulcerated openings, from which thick yellow pus was freely oozing. Ovary and tube were tied with silk and removed. The right appendages were healthy and let alone. The cavity was washed out and drained. The patient did well. Drainage-tube removed on the third day. Fifteen days after operation the patient was quite convalescent. Pulse and temperature normal and appetite good. —*Brit. Med. Journal.*

The lesson taught in this recital of a case is obvious. The case mentioned in my paper on "Glimpses of Abdominal Surgery in Europe," operated on by Mr. Lawson Tait, is pertinent to this subject.

On the 9th June last Dr. Grigg, physician to Queen Charlotte's Lying-in Hospital, London, read before the British Gynæcological Society a paper on the *Dangers arising from Disease of the Uterine Appendages in Childbed.* The paper was based on the reports of four cases of death speedily following delivery, in all of which the uterine appendages were found to be diseased. Dr. Grigg began by remarking that a fatal result from disease of uterine appendages has been pointed out from time to time by various writers. Abscess of the ovary, ovarian cyst, or pyosalpinx have been recognized as sources of puerperal mischief, but they are not regarded as important factors in childbed mortality. This Dr. Grigg believed to be due to the fact that it is rare for a post-mortem examination to be made on a woman dying in child-bed, in public or private. It is due to this paucity of post-mortem examination that the gravity of such diseases with reference to child-bed has not been pointed out. The whole mortality of 548 deliveries in eight or nine months at the Queen Charlotte Hospital was five, and of these four presented in brief the following conditions :—

Case 1—Suppuration of a cyst of the right ovary as large as the closed fist. Rupture of the cyst. Lymph and greenish-yellow pus, two to three pints, in peritoneal cavity.

Case 2—Left-sided pyosalpinx and suppuration of left ovary of old standing. Recent suppuration behind pelvic peritoneum.

Case 3—Acute general peritonitis ; much turbid effusion, with flakes of lymph. A ruptured thin-walled cyst of right ovary of size of a fœtal head.

Case 4—Evidence of old disease of the broad ligaments, cicatricial contraction of the broad ligaments. Kidneys, each, 7½ ozs , cortical coat increased in thickness and very soft; ureters and pelves of kidney much sacculated and dilated. Dr. Allchin, the pathologist of the hospital, and Dr. Grigg agreed that probably the condition of kidneys and ureters was due to the old standing disease about the uterus and ovaries, causing pressure.

Dr. Grigg, in conclusion, justly remarks, "On reviewing these cases, one cannot help feeling that perhaps disease of the uterine appendages might account for many of the inexplicable cases of so-called sporadic puerperal septicæmia which seem to defy every conjecture as to their origin. Should subsequent experience confirm his view, it will place the importance of recognizing diseases of the appendages in another light, and it will be a strong argument in favor of their removal when found diseased, and it will require those who condemn the operation to reconsider their position."

The President (Mr. Lawson Tait), in closing the discussion, remarked that Dr. Grigg's paper was of great value, because it was a record of four out of five deaths, the entire mortality in the hospital in a considerable period of time, and in all four diseased conditions of the uterine appendages were present, and more than sufficient to account for deaths which, had they not been fully investigated, would certainly have been put down in the category of puerperal septicæmia. This phrase was nothing but a huge cloak, expressing our ignorance and limiting our opportunities for investigation. He believed that two at least out of these four patients, perhaps even three, might have been saved by operative interference. The further value of the paper consists in the fact, which was indisputable, that cases of chronic inflammatory disease of the uterine appendages were not only far more common than was usually supposed, but they were froquently fatal.—(*Brit. Gyn. Jour.*, Nov. 26.)

No remark of mine can in any way add to the importance of or emphasize the lessons to be learnt from this recital of cases.

The Use of Anæsthetics in Labor.—A paper on this subject was read by Dr. E. L. Partridge before a meeting of the section in Obstetrics of the New York Academy of Medicine, on the 23rd December last. The author remarked that his paper was based chiefly on personal experience. He asked the question: Shall an anæsthetic be used in labor? If so, under what circumstances and what agent should be employed. He advocated anæsthetics in all operative procedures in midwifery, and thought they might be used in many natural labors with advantage. He would not use it in the first stage except in so-called forced labor, as by Barnes' dilators, etc. He would avoid anæsthesia in the early part of the second stage, because it to some extent modifies uterine action. He would wait for the suggestion of the patient before using it to relieve pain. In a phlegmatic woman or one who has herself well under control, he would not use it. With reference to the objections made to anæsthesia in midwifery, he could conceive that it increased the liability to hemorrhage, while the liability to puerperal fever could not be increased unless by bungling operators. Subinvolution and chronic uterine disease might possibly be a little more apt to occur after the use of an anæsthetic. Chloroform is the agent he usually employs in midwifery, remembering that it is to some extent dangerous, but when women have died from the effects of chloroform during labor it has been carelessly administered. His method of administration is never by a cone, but by a crumpled handkerchief in the bottom of a small tumbler, on which a few drops of the drug are poured. He would not feel safe in giving chloroform to a woman who was already considerably under the influence of chloral. An objection to chloral in the first stage is that the accoucheur must wait until its influence has passed off, and thus it might interfere with the use of chloroform in the second stage. He believed it proper to combine nitrite of amyl with chloroform (the former being an antidote to poisoning by the latter), in the proportion of ten drops to the ounce. He would never administer any anæsthetic without the consent of some other person than the woman who was in labor.

In the course of the discussion which followed, Dr. P. F. Mundé stated that he uses chloroform and does not believe in chloral. One very important point was never to raise the woman up till she had fully recovered from the influence of the chloroform. Dr. W. R. Gillette uses chloroform given in the same way as Dr. Partridge gives it, and mentioned, as an advantage, that when the administration is suspended the glass can be inverted over a plate, the vapor retained, and so the unpleasant effects on the attendants avoided. Dr. H. J. Garrigues uses chloral with but few exceptions in every case of labor. When the os does not dilate well, and there is much pain, he gives it at intervals of half an hour till the patient sleeps. Sometimes he uses, under the same circumstances, morphia or opium. He never uses chloroform in the first stage of labor, and far less nowadays in the second stage than formerly. He always did without it when he could. It protracted labor, and was dangerous. With reference to post-partum hemorrhage, and for an important operation, as forceps-delivery, he always uses ether. There are two very important contra-indications to the use of ether—namely,.(1) the slightest quantity of albumen in the urine, and (2) the presence of any affection of the lungs.—(*N. Y. Med. Record*, Jan. 8, 1887.)

The Inflated Ring in the Treatment of Ectropion, with Catarrh of the Cervix, Stubborn Retroflexions of the Uterus, and Prolapse of the Ovaries and Tubes.—This is the title of a paper by Dr. Sara E. Post in the *N. Y. Med. Record* for Jan. 15, '87. Dr. Post calls attention to the objections and difficulties in carrying out the ordinary and very valuable treatment by tampons, of the affections mentioned in the title of the paper. That these affections are very common and very tedious and difficult of cure, while they give the sufferers a great deal of distress, is well known. The inflated ring in many cases gives the patient an easy and comfortable support, which she can remove at night and while she uses her douches, and replace by herself. This pessary is well-enough known, but probably has in recent years been a good deal neglected. Dr. Post reports a number of cases treated by the inflated ring, and dilates on the results obtained. Cervical catarrh has disappeared. This has been fairly uniform. Backache has also disappeared. The menstrual periods have been shortened. An occasional profuse leucorrhœal acrid discharge has taken place from the vagina, which the authoress believes to have come from the tubes. Their elevation by the pessary has enabled them to be emptied through the uterus. Retroflexions reduced by the inflated ring-pessary have not always or at all events immediately returned on removing the pessary. In all the cases detailed by Dr. Post the inflated ring without the tube attachment was used. These rings have a lump of wax on the inner surface at one point. Through this wax the ring is inflated or some of its air withdrawn by a hypodermic needle. When the needle is withdrawn the wax is compressed to close the opening. Dr. Post insists on the importance of using the ring only partially inflated, as then it moulds itself to the vagina and cervix. If used fully inflated, it causes irritability of bladder and a feeling of weight in the perineum. The ring must be removed frequently, and at night should be placed in a weak disinfectant solution or weak soda and water. It is inserted in the knee-elbow position, and this will be easiest managed if it be folded into a spindle-shaped mass. It requires reinflation every one or two weeks, and removal every one to three months.

The authoress thinks that many of the good results are obtained by the pressure on the cervix, which reduces hyperæmia and so removes erosions, catarrh, and too profuse menstrual flow. Objections to this pessary are the somewhat foul discharge and excoriation of the vagina, but these can be largely removed by faithful douching and removal at night. Such objections are lightly regarded by the patients as compared with the relief it affords.

The American Gynæcological Society held its eleventh annual meeting at Baltimore on the 21st September. Dr. H. P. C. Wilson of Baltimore read the first paper, the subject being *Division of the Cervix backwards in some forms of Anteflexion of the Uterus with Dysmenorrhœa and Sterility.* The cases in which he specially recommended the operation were the following:

1st, Those of anteflexion of the uterus with an elongated cervix, where the body is bent upon the neck or the neck upon the body, or where they are bent upon each other, thus forming a more or less acute angle at the internal os.

2nd, Cases of less acute flexion, but where the cervix is hyperplastic and indurated, sometimes dense as cartilage and blue in color.

3rd, Cases in which there is a hard unyielding band encircling and constricting the internal os, through which the probe passes with difficulty, and gives to the hand the sensation as if passing over rough and dense cartilage, while the finger of the other hand in the sulcus, between the body and the neck in front, gains the impression of a strong cord tied around the uterus at the point of junction between the body and the neck.

In each of these conditions the author thinks the knife ought to be used in preference to other modes of treatment. Nearly all such patients are sterile. No dense, unyielding cervix ought to be forced open. All ill results from cutting operations are the result of improper after-treatment. A clean cut into the cervix he believed to be no more dangerous than a similar cut elsewhere, and nothing to correspond to that from steel dilators or stems. He believed that the patient should be allowed thoroughly to recover from the operation, which usually takes about a month ; at the end of another month the author begins the local treatment of painting the interior of the uterus two or three times a week, followed by glycerine tampons. This he thought should not be continued for more than one or two months at a time. He had performed the operation 400 times, and never lost a patient whose death could be attributed to the operation.

Ergot after Labor.—This was the title of a paper by Dr. John Goodman of Louisville, Ky. He said the custom to give ergot immediately after the completion of labor had become general. The objects aimed at were to prevent after-pains, to promote involution, and to prevent post-partum hemorrhage. The author said that if the drug were incapable of doing harm, and there was evidence that it would accomplish either of these purposes, its use should be continued. But if it was deleterious, we must reject it or restrict its use. He related two cases of tetanic spasm of the uterus produced by small doses of ergot, in one of which septicæmia developed. He thought it absurd to suppose that it could hasten involution, as that is a natural process requiring a certain length of time to accomplish it. In his opinion it should be laid down as an invariable law never to give ergot at the close of the third stage unless the danger of hemorrhage was imminent, and then by hypodermic injection of ergotin was the best method.

The President, Dr. Reamy, agreed in the main with the author of the paper. Drs. Goodell and Parvin believed in the value of ergot, and are in the habit of giving it frequently.

Electricity in Gynæcological Practice was the subject of three papers—by Dr. Engelmann of St. Louis, by Dr. W. H. Baker of Boston, and by Dr. John Byrne of Brooklyn, respectively. Dr. Byrne confined his attention to galvano-cautery in the treatment of procidentia uteri by galvano-caustic amputation of the cervix and linear cauterization of vesical or rectal protrusions, or both. He strongly advocated this method which had yielded him excellent results. He ventured the explanation that some process analogous to ordinary inflammation is brought about by the agency of radiant heat, whereby a permanent shrinkage of some, and complete obliteration of other blood-vessels and lymphatics for a considerable distance beyond the line of actual cauterization is caused, that a condensation of cellular tissue must necessarily also take place, as in this manner dynamic forces, which in health help to maintain the uterus and other parts in normal position, become completely restored or greatly modified.

Dr. Engelmann said that except in the hands of a few men there is very little that is definite about the methods ordinarily employed in the application of electricity. The causes of failure were insufficient knowledge of instruments, lack of localization, concentration, total want of dosing and measurements, etc. Operators had been in the habit of guaging its effects by the number of cells, and he believed that the currents had been too weak to be effective. He described Apostoli's method of using electricity, and exhibited electrodes, battery and galvanometer. He believed that the only definite contra-indication to the use of electricity was severe acute inflammation. He mentioned a great variety of gynæcological affections in which he had employed the agent with great benefit.

Dr. Baker dealt chiefly with the use of electrolysis in fibroids of the uterus. He credited Dr. Kimball of Lowell with having first used the agent for this purpose. Dr. Baker uses very much smaller needles. His rules are the following:—

1. It should not be used about the menstrual period.

2. The patient should be under the influence of an anæsthetic.

3. Electrolytic needles for both positive and negative poles should be used.

4. They should be sharp and thoroughly clean.

5. The needles should be buried in the tumor sufficiently near to each other, so that when the current is introduced it will not be diffused to other parts.

6. The needles should not be too nearly approximated.

7. When both needles are properly placed in the growth, it matters not whether the positive or the negative needle is the internal one.

8. After insertion, a current of four to six cells is first used, gradually increasing to eighteen or thirty cells, the intensity being much more exactly regulated by the galvanometer.

9. The length of time, from ten to twenty minutes, to be determined by the character of the pulse, which should be continually felt, and when found to be diminished in frequency below the normal, the current should be either discontinued or the number of cells decreased.

10. No interruption of the current during the application.

11. Gradual diminution of the current before disconnecting the electrode.

12. The current should be cut off before the removal of the electrodes.

13. The application should never be made at the surgeon's office and the patient allowed to go home after coming from under the influence of ether.

14. After the application, put the patient to bed, where she should remain a week.

Dr. Baker also spoke of the use of the galvanic current in the treatment of chronic cases of circumscribed perimetritic products. As long as there is any acuteness of the inflammatory process, it is hazardous to attempt manipulative interference. He believes that in electrolysis we have a valuable agent to assist absorption and promote cure. His experience, however, has been limited to a single case, but in which the result was so marked that he gave it in detail. His conclusions were :

1st, That electrolysis is a useful agent in the treatment of certain cases of fibroid tumors of the uterus, as well as chronic circumscribed perimetric affections.

2nd, In the treatment of fibroid tumors of the uterus by this agency, frequent applications are not necessary.

3rd, Cases of perimetric affections treated by this method should be selected with care in regard to the absence of all acute symptoms.—(*Am. Jour. Obst.*, Oct. 1886.)

A CASE OF THROMBOSIS OF THE LEFT VENTRICLE OF PECULIAR INTEREST.

Some time since Dr. Geo. Ross presented to the Medico-Chirurgical Society of Montreal a short account of a peculiar and puzzling case which ended fatally. The heart was shown to the Society, and the following is the record that appeared in the proceedings :—

" *Thrombosis in the Left Ventricle of the Heart.*—Dr. George Ross showed a heart which had been removed by Dr. Johnston from a patient who lately died in the General Hospital. Both sides of the heart were greatly distended, and there was marked bulging of the wall of the left ventricle just above the apex. The cavities contained soft blood-clots. There was no clot in the pulmonary artery or its branches. On opening the left ventricle a firm, decolorized and apparently organized thrombus was found filling the spaces between the columnæ carneæ in the vicinity of the septum and projecting slightly into the cavity at a point corresponding to the bulging previously mentioned. The thickness of the thrombus exceeded that of the ventricular wall, which in places was reduced to one-fifth of an inch. A space between the thrombus and the heart wall was filled with a chocolate-brown fluid and the endocardium seemed to have disappeared. At some points the heart-muscle was pale and in part fibroid.

A small, firm, decolorized clot was also seen lying loosely behind the left coronary segment of the aortic valve; from this was prolonged a clot which completely plugged the left coronary artery. A small, firm clot filled the left auricle. Valves normal. Dr. Ross remarked that the patient was a strong, healthy girl, about 25 years of age, who came into the hospital to be treated for an ulcer of the leg, which was supposed to be of syphilitic origin. Suddenly she was seized with a violent pain in the left side of the chest and great difficulty of breathing; her pulse was almost imperceptible at the wrist, and she was in great distress. The dyspnœa and pain grew worse, and the patient gradually sank and died five days after the first seizure. Dr. Ross at first thought it was a case of pulmonary embolism, but was now at some loss to account for the symptoms."

Later, Dr. Mills made a communication, which, taken in connection with the above, the Society thought of such importance as to call for publication in a separate note, which is as follows:

It will be remembered that some time ago Dr. George Ross exhibited to the Society a heart with clots *in situ*, one of which was found to plug completely the left coronary artery. The symptoms of the patient were peculiar and difficult to explain. I ventured then to advance the view that these symptoms were traceable to the clot in the coronary artery, and that this clot explained the presence of the second one. I have since met an account of experiments that seem to me to confirm the view then advanced, and as the case is almost unique, I venture to call the attention of the Society to them.

(1.) Sée and others ligated the coronary arteries in a dog, and found that after two minutes the cardiac contractions gave place to twitchings of the muscular fibres, and ultimately the heart ceased to beat. Ligature of the anterior coronary artery alone is sufficient to produce this result.

(2.) Von Bezold and Erichsen obtained similar results in the rabbit. Ligature of one artery first affects the corresponding ventricle, then the other ventricle, and last of all the auricles. Compression of the left coronary artery causes slowing of the contractions, especially of the left ventricle, whilst the right one at first contracts more quickly and then gradually its rhythm is slowed. The contractions of the left ventricle are also weakened, whilst the right pulsates with its usual force. It follows that as the left half of the heart cannot expel the blood in sufficient quantity, the left auricle becomes filled, whilst the right ventricle pumps blood into the lungs as usual. Œdema of the lungs is produced by the high pressure in the pulmonary circulation, which is propagated from the right heart through the pulmonary vessels into the left auricle. (*Samuelson and Grünhagen.*)

If I remember correctly there was also in the case in question some not very serious affection of the lungs.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Ununited Fracture of Humerus—Resection and wiring of the ends of the bones, with good union at the end of three and a half months. (Under the care of DR. SHEPHERD.)

(Reported by DR. H. S. BIRKETT, House Surgeon.)

J. M., aged 35, admitted June 22nd, 1886, with ununited fracture of right humerus and inability to use arm. On 2nd January, 1886, while driving, was thrown out of his sleigh, which passed over his right arm, about the middle, and across his chest. Fracture of middle third of humerus was diagnosed. The arm was put up with four coaptation splints extending only two inches above and below the seat of fracture. Hand kept in a sling. The arm remained in this apparatus for two weeks, when it was taken down and plaster applied, which was also kept on for two weeks, and when it was removed, no union had taken place. The arm was then again put in splints, and remained so up to admission. At time of injury three or four ribs were broken, but nothing was done for them. Patient has always been healthy. No specific history. The right humerus is found fractured at middle third, the fragments being perfectly moveable over each other. Shortening of 1½ inches has occurred. There is considerable pain at site of fracture.

June 23rd.—Under ether, ends of bone thoroughly rubbed together and then drilled subcutaneously. The wound was dressed with dry dressing, and fracture put up in four coaptation splints with outside angular splint, all very firmly held together with cotton bandages, and patient sent home to return at end of six weeks.

Aug. 3rd.—Patient returned. No union.

Aug. 4th.—Again etherized, and an incision 3½ inches long was made on outside of arm, over seat of fracture, and ends of bone turned out, when the following condition was found: Upper fragment directed downwards and outwards; lower one upwards and inwards; direction of fracture very oblique from above downwards and inwards. The ends were smooth and rounded, and portions of triceps muscle and the musculo-spiral nerve were found between the fractured ends. Muscle and nerve were carefully dissected away; fractured ends of bones sawn off obliquely, brought together, and held in position by a strong suture of thick silver wire, which went through both fragments. The wound was then thoroughly irrigated with solution of bichloride 1–1500, and closed with a continuous suture of catgut; small drain at lower end of wound; dressed with iodoform and sublimate jute. The arm was then put up on an internal rectangular splint, with an external splint (Gooch's) reaching from shoulder to elbow, the whole kept in position by firmly applied gauze bandages.

Aug. 11th.—Dressings removed, and soiled only with serosanguineous discharge; no redness or swelling about edges of wound, and edges perfectly united. Sutures removed and tube shortened. Dry dressing and splint reapplied. Temperature 97° to 98½°. Patient allowed up.

Aug. 20th.—Dressings quite dry. Drainage tube removed. Line of incision perfectly united. Dressed as before. Temperature 98° to 99°. General condition of patient good.

The man went home for some six weeks, and when he returned, splints were taken down; fair fibrous union had taken place. The bones were rubbed together and again put up firmly in the same splints, and the patient told to return about end of November.

Nov. 25th.—Returned to-day. Humerus firmly united by strong bony union. Splints removed. Owing to the long period the man had been under treatment he had some stiffness of the elbow, but could move his fingers freely.

Remarks.—In this case non-union was due to the presence of muscular tissue between the ends of the bones, and union could not have possibly taken place by other than operative means. The pain which was supposed to be due to the "knitting of the bones," was caused by the pressure on the musculo-spiral nerve, which was between the ends of two fragments. The wire suture which united the sawn ends of the fractured bone was cut short and hammered down on the bone and left there. It did not cause the slightest inconvenience. This operation is one which, if performed with a strict regard to antisepticism, is devoid of danger and gives most satisfactory results, but it should not be resorted to till other measures (as drilling and rubbing the ends of the bones together) have been tried.

MONTREAL DISPENSARY—DEPARTMENT OF GYNÆCOLOGY.

CASES UNDER THE CARE OF DR. ALLOWAY.

CASE I.—C. D., aged 44, married 22 years. Has had five children at full term and four miscarriages. The last miscarriage was supposed to have been due to a fall at fourth month of gestation, but contents of uterus did not escape until the ninth month. Has a metrostaxis every two weeks, sometimes going as far as the third week, and lasting six days. Discharge sometimes profuse, and accompanied with pain in back and sides. Intermenstrual leucorrhœa. The menorrhagia has existed for the last five or six years, and has reduced her much in strength. She complains of constant headache and facial neuralgia, frequent micturition, and constipation.

Examination.—Perineum intact; vagina relaxed and spacious with uterus and pelvic floor low down. No para- nor perimetritis. Uterus enlarged +1½ in., but not retroverted. Cervix hypertrophied, intravaginal portion measuring two inches in length and one inch and a half across at external os. It is the seat of extensive cystic hypertrophy, the hypertrophic disease extending half an inch back on the posterior lip. An old bilateral laceration is evidently here the cause of the hypertrophy. The corners have become cicatrized up, giving the cervix a truncated mushroom appearance. To do Emmet's operation of trachelorraphy in this case would be useless, as it would leave a considerable amount of diseased tissue still in the anterior and posterior lips. I therefore decided to do Hegar's operation (*Fig.* 1) or a modification of it (*Fig.* 2) of exsection of a portion of the cervix, removing all of the diseased portion, as, by so doing the cervix is reduced in size, the nutrition of the organ is effected by reducing its blood supply, and involution of the whole organ is induced. Fig. 2 shows the manner in which the sutures are passed, the three centre ones in the anterior and posterior lips uniting the mucous membrane of the cervical canal to that covering the portio-vaginalis, and in this way retaining the patency of the os. One week before the operation the uterus is thoroughly curetted with the sharp instrument, after which carbolic acid is applied to the entire endometrium on an applicator wrapped with cotton.

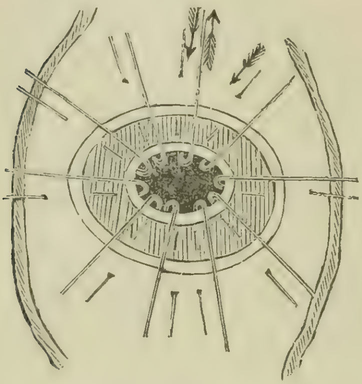

FIG. 1.—(From Hegar.)

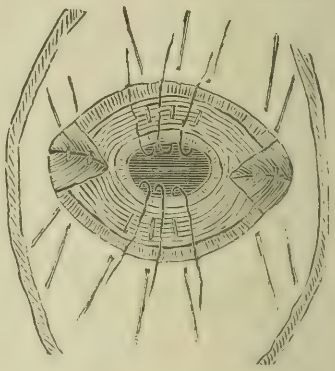

FIG. 2.

The operation is done under ether, with the patient on her back in the lithotomy position, a Sims or Simons' speculum pulling the perineum well downwards in the hands of an assistant.

A Museaux double tenaculum is fixed high up in the cervical canal and the uterus drawn down to the vulva. With straight scissors the cervix is slit up on each side to a point where you wish to begin the exsection. With a scalpel the posterior lip is carefully dissected off; the anterior or upper lip is then rapidly removed in the same manner. These lips are trimmed off with rectangular curved scissors. The centre sutures are then passed and the corners closed by two sutures each, as shown in Fig. 2. Of the sutures I have used in this operation I prefer the silk-worm gut shotted, but silk or wire will do. It is well to perform this operation under constant irrigation of a weak antiseptic solution, no sponges or like material being necessary. After the operation the vagina is irrigated night and morning with an antiseptic hot solution and the patient kept in bed. On the eighth or ninth day afterwards the sutures are carefully removed and the patient further kept in bed for five or six days. In all such long-standing cervical laceration cases as the one I have described, we get much better results in the more perfect involution of the whole organ than from Emmet's operation.

Case II.—A patient attending my clinic asked me to see a friend of hers at her house with the following short history:

Aged 26. Has had three children, the last one born fourteen days ago. She was attended by a midwife. Labor was normal; did very well until the tenth day, when she became chilly, complained of slight headache, loss of appetite, pain in back, and intense prostration. The feeling of prostration was what concerned the patient and her friends most. She could scarcely walk from her bed to the sofa without being thoroughly exhausted. She was very anæmic; had a rapid pulse and slight elevation of temperature (101°); tongue dry, and was constantly thirsty; bowels very loose, amounting to troublesome diarrhœa. She also complained of night sweats. On examining the abdomen there was not the slightest tenderness on firm pressure over fundus of uterus or broad ligaments. In fact her whole condition seemed to point anywhere but to the region of the pelvis for explanation of symptoms. As, however, I had seen other cases of a similar nature during the second and third week of puerperal convalescence, I assisted the patient to place herself on a kitchen table in front of a good light. Placing her in Sims' position and retracting the perineum I got the odor of an infective purulent discharge. The cervix was small, seemed well involuted, and was neither lacerated nor eroded, showing that absorption could not be taking place from the vagina. I then fixed a volsella in the anterior lip of cervix and drew down the uterus. As I did so a gush of the most fœtid greenish pus escaped. Relaxing my hold on the volsella, the uterus went back to its anteflexed position and the flow of fluid from the uterus stopped as if a controlling cock had been turned. I then prepared a 1–2000 solution of corrosive sublimate in a fountain irrigator with a return-stream tube, and looking about for one of the two women who were with me a few moments before, to hold up the bag of the irrigator, I found myself and patient the only occupants of the room. The horrid stench of this pent-up pus was too much for them, and out of dire necessity they ran from the apartment, which was, I must say, a small and miserably ventilated one. With the aid of a nail in the window-sash I managed to wash out the uterus thoroughly until the return fluid was clear. I then removed the speculum and passed my left fore-finger into the uterus, at the same time pulling the organ well down with the volsella. At the position of the internal os I could feel a strong band or ridge stretching across the anterior wall. Over this ridge my finger passed directly forwards and downwards into the cavity of the body of the uterus, on the anterior wall of which I could distinctly feel two small velvety elevations about the size and thickness of a five-cent piece. The smoothness of the surrounding mucosa of the uterus within reach was very marked and interesting. These small elevations were no doubt the remains of portions of placental tufts left behind attached to the wall of uterus, but which would have done no harm in their melting-down process had there been free drainage. The fibrous ridge spoken of on the anterior wall almost invariably exists in these cases of extreme anteflexion. It acts as a most complete valve, preventing the ingress and egress of fluids.* This band was, together with the extreme anteflexion (*Fig* 3), undoubtedly the cause of retention of the discharge.

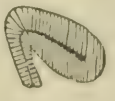

FIG. 3.—Showing shape of uterus.

The uterus was converted into a veritable abscess which could discharge its contents only by a process of overflow, and occasional contraction of the body of the organ overcoming the valve-like obstruction at the cervix. (*Fig.* 4.)

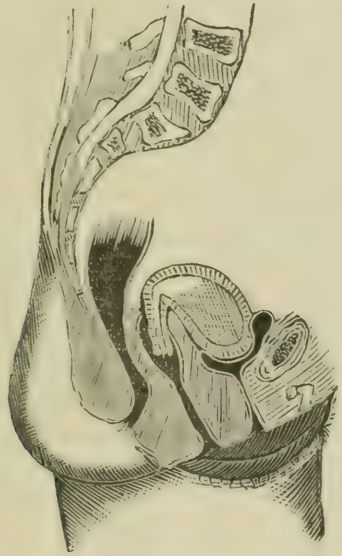

FIG. 4.—Showing retained discharge converting uterus into pus-dilated cavity.

The symptoms complained of by the patient were those of a chronic septicæmia due to constant absorption of a very small quantity of ptomäines from the cavity of the uterus. The skin and bowels were, by their over-action, endeavoring to maintain the balance between health and a serious explosion. The nervous system was giving evidence of distress in the headache, cardiac irritation, and slight elevation of temperature.

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* Sims on Treatment of Stenosis of Cervix. Am. Gynæ. Trans., 1878.

A case of this kind has a special interest attached to it, in that it is a type of the old midwife's " weid " when that visionary disease occurred late in the convalescence. The " weid " did not *always* kill the patient, nor would it have killed this patient, as, with time and much suffering the uterus would have gradually emptied itself, the danger always being in the foreground of a sudden attack of lymphangitis followed by interligamentous pelvic abscess.

But to return to the treatment in this case. The uterus was irrigated in a similar manner the next morning and the cavity filled with iodoform and boric acid suppositories. The temperature in twelve hours fell, the heart became quiet, and the patient was strong and out in a few days afterwards. I did not think it necessary to curette the tufts spoken of, as there had been no secondary hemorrhage, although in Germany it would probably have been done.

CASE III.—*Ptomäine Poisoning from retention of a decomposed Decidua.*—C. B., aged 26. Has had two miscarriages and two children at full term. Her youngest living child is seven months old. She has a pronounced retroflexion of uterus. She menstruated but once (four months ago) since the birth of last child, and did not mind its non-appearance again on account of her nursing. During the last three weeks, however, she has been losing blood from the uterus at intervals. During the last week she complained of chilly sensations, gradually increasing exhaustion, thirst, constant headache, diarrhœa, and severe pain in the back. She has now a pallid pinched countenance ; rapid small pulse (135), temperature 102°F., and feels so exhausted she can hardly walk across her bedroom.

On examination, there is found a fœtid brownish uterine discharge. Uterus retroflexed, with fundus lying in hollow of sacrum, enlarged, and excessively tender. The os is closed, cervix feels large, but otherwise normal.

From a history of this nature,—no matter how strongly the patient protested against the possibility of her being pregnant,—it will be seen that there was a decomposing product of conception incarcerated within this bent uterus, and that it must be got out as quickly as possible, notwithstanding the firm closure of the cervix and the strict injunction from the "old masters" that we must wait until it is opened (*sic*). The patient was anæsthetized, placed on a table, Sims' speculum introduced, and the uterus drawn down to the introitus with a volsella. The cervix was now dilated with forceps, the mass seized and drawn out. With the dull curette the cavity was scraped over and all fragments removed with the forceps. Lastly, the cavity of uterus was washed out with a 1–2000 solution of corrosive sublimate. The following afternoon the patient's pulse was 86, temperature normal, and other abnormal conditions before mentioned had disappeared.

CASE IV.—*Profuse intermittent Uterine Hæmorrhages for eight weeks, after missing two menstrual periods. Cervix closed.*—L. M., aged 28. Has had three miscarriages and two full-term children. Last miscarriage eighteen months ago. States that she missed two menstrual periods, and that two months ago she began to bleed. She would experience sudden gushes of blood from the uterus, accompanied with some pain. The bleeding would continue in a minor degree for a few days and then stop, would again return in six or seven days and again stop in the same way. This state of things continued up to the time I saw her (eight weeks from supposed cessation of pregnancy). I saw the patient at about three o'clock in the afternoon, directly after a severe hæmorrhage. I found the cervix firmly closed, hard, and enlarged from old cystic hypertrophy. Body retroflexed, exceedingly tender, and lying in hollow of sacrum. Not having instruments with me I told the patient I would return the next day and remove the contents of uterus. At six o'clock the same afternoon however, I found the patient had had a severe rigor which lasted over half an hour. Pulse now 120; temperature 103°F.; severe headache and other constitutional disturbance. She was anæsthetized, placed on a table, and treated in same way as case No. 3. I had some difficulty, however, in finding the mass in this case. It seemed to be incarcerated down in the left cornu of uterus. The forceps went into the uterus unopposed to the depth of five inches, and it was only by a careful and systematic search that the mass was discovered in the left cornu and its vicinity. This patient was well enough to be up and about next day.

At both of these interesting cases—which occurred within a few days of each other—Dr. John A. MacDonald was present.

Case V.—*Retained products of conception causing Hæmorrhage and Ptomaine Poisoning. Removal at Clinic.*—This case, aged 40, mother of many children at full term and the subject of several miscarriages, presented herself at my clinic a few weeks ago. She complained of having passed two menstrual periods, and had been bleeding off and on during the last two weeks. She was exhausted, feverish, had a rapid pulse, and other symptoms of septic absorption. On examination a large dark blood-clot occupied the cervix. The forceps was passed beyond this to the fundus and there found a large decidual mass. The uterine cavity was thoroughly curetted and all shreds removed in the presence of some gentlemen attending the clinic. The cavity was washed out with sublimate solution 1–2000, a tamponade of iodoform with string attached placed against the cervix, directions being given to remove it that night, and use hot carbolized irrigations night and morning for a few days. This woman left the clinic quite undisturbed, as if nothing in fact had happened, and drove to her home some two miles distant in a western suburb. She had no more trouble.

I have introduced these cases of inevitable abortion in this report to show with what ease and safety the contents of the uterus can be removed in the manner described. At the same time I would not wish anyone to think that the operation is an easy one to perform by those unpractised in uterine surgery. Like all other manipulations about the uterus, it requires a perfect knowledge of the parts and some special manipulative skill in this branch of our art. The only danger I can see regarding the procedure consists in leaving a portion of the mass behind in the uterus, requiring a second attempt. There is no reason, howevea, why any physician cannot perfect himself in this as well as in any other surgical procedure. I have not as yet made an exact calculation from the records of this operation, but I think I must have done it over one hundred times with the happiest results, and have witnessed very unfortunate consequences result from following the old *expectant plan* of treatment.

Reviews and Notices of Books.

The Diagnosis and Treatment of Diseases of the Kidney amenable to direct Surgical Interference.—By W. Bruce Clarke, M.A., M.B., Oxon, F.R.C.S., &c. London: H. K. Lewis.

This little book is limited to a description of those diseases of the kidney which are amenable to surgical treatment. The first chapter treats of the anatomical situation of the kidneys, and anomalies, such as misplaced, single and horseshoe kidneys, are described, also the anomalies of the renal arteries. Mr. Clarke says that he has only seen extra branches entering at the two ends of the kidney in one case in thirty in the dissecting room. In our experience such anomalous vessels occur much more frequently, as often as one in five or six. There is one anomaly of the vessels which Mr. Clarke has not alluded to, and that is complete absence of the main vessel entering the hilus, its place being supplied by arteries entering at the two ends. Injuries of the kidneys and ureter are next considered, and numerous cases are given in illustration. Then follow excellent chapters on the pathology, diagnosis and treatment of new growths of the kidney, parasites of the kidney, and hydronephrosis. A very excellent description of calculus of the kidney and ureter is next given, and the chapter is fully illustrated. Mr. Clarke is of opinion that the removal of a calculous kidney in an advanced stage of suppuration is an unwise proceeding and should not be attempted, and that nephrotomy should be performed in such conditions. In many cases of advanced calculous pyelitis the kidney has been successfully removed, and we are of opinion that Mr. Clarke is rather too conservative on this point. A preliminary nephrotomy is certainly a wise method of procedure, and drainage may accomplish wonders, but the disease and its cause still remain, and the fatal termination is often merely postponed. We have seen kidneys in the most advanced stage of suppuration removed without the great difficulties due to adhesions which Mr. Clarke lays so much stress on.

In the chapter on scrofulous disease of the kidney, the author very properly draws attention to the fact that in these cases the disease is often in the first instance referred to the bladder, and that frequent and painful micturition are constantly prominent symptoms. Exploratory incision is advised and preliminary nephrotomy for the purpose of drainage and in order to ascertain the condition of the other kidney, for if the other kidney is not performing its duties it would be useless to perform nephrectomy.

The chapter on "operations on the kidney and their mode of performance" is an interesting one, and each operation is fully described. In describing nephrotomy, the author states that "by gently separating the kidney from its surrounding connective tissue with the fingers the anterior surface can be thoroughly explored and the whole kidney pulled outside the body and freely handled." Now in our experience the pulling out of the kidney, especially when situated high up under the ribs, is no easy matter, and even if it were as simple a proceeding as Mr. Clarke states it to be, we very much question whether it would be a wise one. In speaking of the question of drainage after nephrectomy, he says "if the kidney has shelled out without any trouble there is no need of drainage any more than in an ordinary case of ovariotomy; but if there is any doubt in the operator's mind, it is safer to drain than to do without drainage." We should advise drainage in all cases, for even if the kidney shells out easily there is always after-oozing which requires drainage; after simple ovariotomy no drainage is necessary, because where no adhesions exist there is no after-oozing. In many cases of nephrectomy it is well not merely to drain but to plug the wound with iodoform gauze for 24 hours, as advised by Bergmann. In cases of suspected stone, where the kidney has been cut down upon and no stone is found by needle exploration, the author advises incision of the kidney and the employment of a flexible catheter with a metal or porcelain top. With this instrument he has been able to explore, in the dead subject, every part of the pelvis and calyces.

The book concludes with a short chapter on the methods by which one ureter can be temporarily occluded for the purpose of ascertaining the actual condition of each kidney before resorting to operation. We have perused this book with much pleasure, although the materials from which it is written are, perhaps, drawn too exclusively from British sources, we can recommend it as giving an excellent account of the present state of the surgery of the kidney. It is concisely written, is furnished with a good index and bibliography, and is splendidly illustrated with nineteen full-page original cuts. The diagrammatic illustrations are especially useful.

Ueber den mit Hypertrophie Verbundenen Progressiven Muskelschwund und Änliche Krankheitsformen.—Von Dr. Friedr. Schultze, Professor extr. an der Universität Heidelberg. Mit drei lithographirten Tafeln. Wiesbaden: J. F. Bergmann. 1886.

Among the many recent important neurological advances, not the least is the definite recognition of a purely myopathic progressive atrophy as distinct from a neurotic progressive atrophy. It is true that Friedrich for some time before his death contended for the essentially myopathic origin of many muscular atrophies, but it is only within the last two years that the truth of this view has been established beyond doubt. Prominent among the workers who have brought this about stands the honored name of Schultze of Heidelberg. In the volume under consideration, Prof. Schultze not only gives a synopsis of the work performed by others up to the present time in these important groups of diseases, but also a considerable number of observations which he has made himself, and some of which are published for the first time. He divides muscular atrophies into five distinct groups, the first being the well-known "Atrophy with pseudo-hypertrophy." This disease is a purely muscular affection. In the most pronounced cases of it there never has been found changes in the central or peripheral nervous system to account for the marked atrophy.

The second variety is the "Hereditary form of progressive muscular atrophy." In this form there may or may not be pseudo-hypertrophy. There are many types of hereditary atrophy, but as these depend on its extent and localization it only leads to unnecessary confusion to make such a division as is made by certain authors. Hereditary progressive atrophy is a myopathic affection. In one marked case, recently very carefully examined by Landouzy and Déjérine, no changes whatever were detected either in the central or peripheral nervous system. Schultze's third division is characterized by progressive atrophy without pseudo-hypertrophy, with the absence of heredity and without any marked nervous symptoms, but frequently *with genuine hypertrophy.* Here in all probability we have also to do with a pure myopathic affection. In the fourth form, there are slight nervous symptoms with few changes found in the cord and nerves, while there are marked changes in the muscles themselves. The fifth variety includes all those cases of slowly developing muscular atrophy where there is nothing found but degeneration (intense) of the anterior horns of the spinal cord. The majority of these cases of true neurotic atrophy are attended by degeneration of the lateral columns and bulbar paralysis. This form is very seldom attended by pseudo-hypertrophy and never by a true hypertrophy of the muscles.

The diagnosis between neurotic and myopathic atrophy is to be made by the existence or non-existence of certain serious symptoms, as bulbar paresis and lateral sclerosis—through the condition of the muscles; in particular through the existence or not of hypertrophy or pseudo-hypertrophy—through the localization of the atrophy, the existence of heredity, and the age of the patient. The presence of the reaction of degeneration, of fibrillary contractions and of pain speak strongly for the neurotic origin of an atrophy, but they do not absolutely exclude a myopathic atrophy. If the atrophy commences in the muscles of the face, shoulder or in the lower extremities, it is probably muscular; while if the muscles of the hands are the first to be affected, it is in all likelihood neurotic.

Schultze makes a valuable suggestion when he proposes to call neurotic atrophy "motor tabes," reserving the name "primary muscular atrophy" for the cases of *pure* muscular atrophy. If the latter is attended by hypertrophy or pseudo-hypertrophy, these terms are simply added.

The Methods of Bacteriological Investigation.— By Dr. Ferdinand Hueppe. Translated by Hermann M. Biggs, M.D. New York: D. Appleton & Co.

Of all the abundant crop of books on this subject which have recently appeared, this one is undoubtedly the best and most practical. The German edition was written at the special request of Prof. Koch by the man who was in his opinion best qualified to do it. The fact that in Germany three large editions have been sold out within two years is a proof that he has done his work well. The American is well translated from the last German edition, and is well up to date even in a branch in which the changes are so rapid. While lovers of high art will miss the pretencious chromo-lithographs of bacteria and cultures which form the leading features of the manuals of Bates, Woodhead and Crookshanks, the loss is rather an æsthetic than a practical one. No chromo-lithograph, however resplendent, can prove of much practical value as compared with the study of the objects themselves. The methods described are not confined to those of Koch. A novelty to English readers is the introduction of the physiological classification of deBary as well as the primitive morphological one of Cohn. Another valuable feature is a well-written chapter of directions to distinguish objects which can be mistaken for bacteria in microscopic preparations, though we notice he omits to mention granular fibrin as one of them. The style is throughout exceptionally clear and precise, though in many places rather too terse. Some mention of the numerous simplifying changes recently sanctioned by Koch himself might surely have been introduced; for instance, no one outside of the books thinks it necessary to subject *all* glass after an ordinary washing to an elaborate rite of purification by "mineral acids, distilled water, corrosive sublimate, absolute alcohol, and ether" before he ventures to sterilize it by heat.

If the glass is simply washed clean with water and then heated the result is exactly as good. On the other hand, however, it must be admitted that the methods mentioned are certain to give good results, and any one would soon learn for himself how much of the sublimate and alcohol ritual he might neglect with impunity. The book is well got up, clearly printed, and is not expensive.

Outlines of the Pathology and Treatment of Syphilis and Allied Venereal Diseases.—By HERMANN VON ZEISSL, M.D., late Professor at the Imperial-Royal University of Vienna. Second edition, revised by MAXIMILIAN VON ZEISSL, M.D. Translated by H. RAPHAEL, M.D., Attending Physician for Diseases of Genito-Urinary Organs and Syphilis, Bellevue Hospital Out-patient Department, etc. New York: D. Appleton & Co.

In this work the author claims only " the modest task of presenting a comprehensible picture of venereal diseases and their treatment as briefly as possible to the practical physician whose time will not permit to read extensive works upon every special branch of our science." In striving to accomplish this, he has admirably succeeded, the unrivalled facilities possessed by him in the great Allgemeines Krankenhaus of Vienna having furnished a vast store of material from which to draw. Gonorrhœa and the other local affections are fully considered, whilst constitutional syphilis and the multitudinous organic disorders to which it gives rise receives the largest share of attention. The work is so divided into sections and systematized as to make it very useful and handy for reference. It will be found a valuable guide from the hands of one of the most experienced syphilographers of the period.

Rheumatism: its Nature, its Pathology, and its Successful Treatment.—By T. J. MACLAGAN, M.D. New York: Wm. Wood & Co.

The publishers have done well to add this volume to the library of standard authors. As is well known, Dr. Maclagan was the first to bring prominently before the profession the valuable properties of the salicyl compounds in the treatment of rheumatism. The use of salicin in this disease was before this not altogether unknown, and in some very out-of-the-way places the infusion of willow-bark was looked upon as a sovereign remedy. Indeed, we know an old practitioner in this province who long ago used to speak of the great success he met with in treating acute rheumatism by this remedy. Dr. Maclagan holds the miasmatic theory of rheumatism, and thus explains the manner in which these medicines produce their anti-rheumatic effects. At the present time a good deal is being written upon this subject, and some diversity of opinion is shown to prevail upon the power of these remedies to control the disease itself and prevent the important complications from occurring. It behoves all, therefore, to acquaint themselves with the original views expresssed by their chief investigator.

Books and Pamphlets Received.

A TEXT-BOOK OF MEDICINE FOR STUDENTS AND PRACTITIONERS. By Dr. Adolf Strumpell. Translated by Herman F. Vickery, M.D., and Philip C. Knapp, M.D., with editorial notes by Fred. C. Shattuck, M.D. New York, D. Appleton & Co.

MANUAL OF OPERATIVE SURGERY. By Joseph D. Bryant, M.D. With about eight hundred illustrations. New York, D. Appleton & Co.

ON DISEASES OF THE LUNGS AND PLEURÆ, INCLUDING CONSUMPTION. By R. Douglass Powell, M.D., Lond. Third edition. New York, Wm. Wood & Co.

ALPINE WINTER IN ITS MEDICAL ASPECTS. By A. Tucker Wise, M.D., L.R.C.P., &c. Third edition. London, J. & R. Churchill.

HANDBOOK OF PRACTICAL MEDICINE. By Hermann Eichhorst. Vol. X. Diseases of the Blood and Nutrition, and Infectious Diseases. New York, Wm. Wood & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, Nov. 19th, 1886.

J. C. Cameron, M.D., President, in the Chair.

Dr. Major exhibited the following cases, taken from his clinic for Diseases of the Nose and Throat at the Montreal General Hospital:

1. *Complete paralysis of the right vocal band*, the result of pressure exerted by a fibroid on the right recurrent laryngeal nerve. The patient, aged 47, a painter by trade, applied for treatment. On examination, the right vocal cord was found in a state of complete immobility, and occupied a position midway between that of full inspiration and phonation. A blue line on the gums and abdominal colic pointed also to lead poisoning. This latter complication, however, in no way nor at any time influenced the laryngeal condition.

2. *Early Laryngeal Œdema (tuberculous)*, with no recognizable pulmonary infection. The patient, aged 50, applied for relief of dyspnœa and a barking, choking cough. Œdema of the left arytenoid body alone was present, the swelling was grey in color and of the size of an acorn, and interfered with voice production and deglutition. After a lapse of couple of weeks a similar condition developed in the right region. Some days later the epiglottis showed signs of swelling and thickening, and later on pulmonary signs became apparent. The lactic acid treatment was adopted, and local improvement followed. The condition of the chest would lead to the opinion that temporary arrest of the disease had taken place there also. The gradual development and extent of the œdema and subsequent lung signs are the interesting features of the case, as was also the general improvement under purely local treatment.

3. *Three cases of Laryngeal Papillomata.*—(*a*)* In May, 1880, Dr. M. performed a tracheotomy on this child, then in her third year, for relief of suffocative paroxysms that endangered

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* *Vide* writer's paper, "Rest and Tracheotomy," Canada Med. and Surg. Journal, December, 1882.

life. At an examination preceding the operation the larynx was found filled with warty growths. Canulæ have been worn constantly since, and no evil results have arisen therefrom. The physiological rest afforded the larynx has had a marked effect in arresting the development of the growths, as has been proved experimentally during periods of temporary improvement by plugging the tube, when increased activity of the excrescences invariably followed. Absolute alcohol has been used daily as a spray in the larynx by the child's mother with the very best results. At two recent sittings evulsion by cutting forceps had been practised, removing any remaining neoplasms. Particular attention was requested to the healthy condition presented by the vocal cords, there being no alteration of color, diminution of lustre, abrasion of surface, or impairment of movement perceptible. The writer attributed the satisfactory state of the patient to the spray of absolute alcohol and the employment of the quarter circle tube, which latter he considered less liable to produce tracheal disturbance than any of the many other makes in general use. The tube has now been withdrawn and good voice is produced.

(*b*) A female, aged 20, was first seen in October, 1885 ; complained of loss of voice, hoarse and painful cough, and great general debility. The larynx was found to be intensely congested, as also the trachea, which latter was of a raw-beef, purplish hue. The vocal cords were rough, granular-looking, and swollen, showed no loss of surface, and there were no growths present. The case was treated locally by astringents, etc., until May 1886, with little, if any, improvement, when attendance ceased, owing to the writer's absence in Germany. In September 1886, when the case was again seen, extensive papillomata of large size were found springing from the vocal cords in all directions and from the epiglottis. These growths were removed at two sittings, when local treatment was again resumed, with the satisfactory results demonstrated.

(*c*) A lady, aged 24 (a private patient), was referred by Dr. James Stewart of Pictou, Nova Scotia, in August, 1883, and so closely resembles the preceding one in several important particulars, that, although she could not be induced to be present, the history was recorded. When first seen in August, 1883, there was aphonia, or more correctly, dysphonia only. The history given was that of ordinary cold, and had so continued without improvement for two years. On laryngoscopic examination the vocal cords were thickened, red and granular-looking; there were no growths present. Local applications of a very thorough nature were employed over a period of two months, with but little benefit. In September 1886, the patient, who meantime had passed through a number of hands, placed herself for the second time under treatment. On examination, papillomata were found on the laryngeal face of the epiglottis, and the vocal cords were completely obscured from view by them. There was now complete aphonia, the breathing was much embarrassed, and coughing was almost incessant. The trachea presented an appearance such as described in the preceding history. The cords also showed at such points along their edges as were visible evidence of erosions and irregularities of surface. After the removal of these neoplasms by means of cutting and crushing forceps, cold iron snare, and V. Schrötter's guillotine, for no one method was in itself sufficient, a very unsatisfactory state of the vocal cords was found. Under local applications of powerful astringents, etc., improvement followed, and a very fair quality of voice has been established.

In the two latter cases nasal respiration was very much impeded, and it was only after the reduction of the hypertrophied turbinated tissue and the restoration of healthy nasal respiration that the local medication of the larynx showed any good result. This fact should not be lost sight of in the treatment of all chronic laryngeal disease. These were at first cases of chronic catarrhal laryngitis, and if nasal hypertrophies had been at first removed, convalescence would most probably have resulted without the transition to papillomata having first to be undergone. In this respect papillomata should form no exception to all other laryngeal conditions, and the dependence of a healthy larynx upon normal nasal respiration cannot be too strongly emphasized. The growths were examined by Dr. Wyatt Johnston, and on section were seen to be radiating papillæ covered with a thick layer of epithelium and having vessels in the centre. No hyperplasia of submucous tissues and no lymphoid nodules were to be seen. The epithelial cells in *c* were larger and more loosely arranged than in *b*.

Dr. Major also showed the following instruments :—

1. An improved nasal traction snare and écraseur.
2. A nasal spud or denuder.
3. An improved nasal écraseur.
4. A laryngometer. A laryngeal mirror engraved on its reflecting surface with a scale for the purpose of measuring movements or spaces in the larynx or composing them relatively.

The nasal snares are both angular, and among other improvements introduce a novel feature in a revolving wheel or pulley placed at the angle of junction of the canula with the shank over which the wire plays, thus reducing friction, increasing power and imparting strength to the instrument at its point of greatest weakness. The mechanical principle involved requires no vindication.

Perforation of the Gall-bladder.—DR. W. G. JOHNSTON gave an account of an autopsy he had performed for Dr. R. P. Howard. The abdomen was found distended, panniculus and omental fat excessive. The abdominal cavity contained several quarts of thick sero-fibrinous fluid mixed with bile and of a deep brown yellow color, not fœtid. (A small incision made by undertaker for injecting a small quantity of preservation fluid was found in left loin. This fluid, readily recognized by its aromatic smell, was not found in general peritoneal cavity.) The coils of intestines glued together by recent adhesions formed numerous sacculi. In the right hypochondrium the hepatic flexure of the colon was found imbedded in a mass of firm old adhesions, attaching it to the lesser omentum and tissues about gall bladder, which could not be seen till adhesions were dissected off. Near the neck of the gall bladder a small orifice was found, through which thick greyish-brown bile was escaping. On opening the gall-bladder this orifice was valvular in character, its size that of a No. 4 sound, and it corresponded to a spot where the mucosa is eroded and the walls thinned. Elsewhere the walls of gall-bladder are flaccid, somewhat thickened and firm, and contained about an ounce of bile mixed with mucopus. Its cavity was divided into three sacculi by the contraction of fibrous tissue in the wall. The middle one of these contains a gall-stone the shape of a bean and about the size of a pigeon's egg; close beside this is a spot where the wall has been eroded, but was secured against the surface of liver by inflammatory fibrous tissue. In a pocket near the perforation, but not corresponding to it exactly, was a small gall-stone the size of a pea. The cystic and common ducts were thickened. Just at their junction, lying really within the cystic duct, but partly obstructing the common duct by its pressure laterally, was a gall-stone the size of a pigeon's egg. A probe could be passed through either duct beside it. No other gall-stones in peritoneal cavity. Duodenum contained gray, clay-colored fæces, but bile exudes from the papilla on pressure. No signs of bile anywhere in intestines. Some slight intestinal catarrh. Liver a little fibrous and fatty. Other organs normal.

Dr. Howard, in reporting the case, said its clinical features were of unusual interest. It was a case of acute general peritonitis from perforation of the gall-bladder in a man aged 65. The patient was in good health at the beginning of the month. After four days of epigastric pain, never very severe, patient became jaundiced. Next day there was vomiting; pain in the epigastrium became more marked, especially in region of gall-bladder. There was no very marked tenderness on pressure, but pain and symptoms of peritonitis extended over entire abdomen. Pain was not sufficient, however, to necessitate an opiate. The temperature on the morning of the sixth day was 100.8° and 99.5° at night; on seventh day, 100.6°; eighth day, 100°; and ninth day, 98.8°. The abdomen gradually became enlarged and tympanitic, but still no severe pain. After third day jaundice gradually increased. The diagnosis was very obscure. Cancer could be excluded, and as there was no history of gall-stones, a diagnosis of peritonitis spreading from the gall-bladder was made. It was strange that the escape of so irritating a fluid as the contents of the gall-bladder should have caused no collapse or severe pain. No perforation was diagnosed. It is an important question for consideration whether surgical interference in this case would have availed anything. The gall-bladder was so deeply imbedded in old adhesions that it would be hardly possible for a surgeon to have reached it. The gradual invasion of the symptoms was probably due to the slow oozing out of the contents of the gall-bladder.

Dr. Wilkins asked if non-action of bowels in such a case would not be due to spasm of the muscular coat owing to the peritonitis, and whether an opiate treatment would not be most successful in relieving constipation.

Dr. Howard stated that the treatment had been mainly an opiate one.

Dr. Geo. Ross had been struck, on seeing the case, by the absence of the usual marked features of acute peritonitis. The obstinate constipation had suggested intestinal obstruction. He called attention to the fact that severe acute peritonitis may coexist with a normal or only sub-febrile temperature, the idea that acute peritonitis necessitated a high temperature being quite fallacious.

Dr. Shepherd thought that surgically nothing could have been done. The anatomical features of the case placed it out of the reach of surgical interference. Excision of the gall-bladder could not have been successfully performed owing to mechanical difficulties.

Dr. R. J. B. Howard suggested that perhaps in a similar case simple ligature of the cystic duct by preventing the passage of bile from the liver to the gall-bladder would change the discharge of acrid bile into the peritoneal cavity to one of a little harmless mucus.

Dr. Wilkins asked when the perforation probably took place.

Dr. Howard, in reply, said the perforation probably occurred early. There was nothing in the history of the case to indicate sudden rupture. Bile entered peritoneum gradually.

Dr. A. F. Schmidt showed a case of *cancer of stomach*, Apparently the whole stomach was tranformed into cancerous tissue. There was also an extensive diffuse cancer of the head of the pancreas. The tissues in the neighborhood were extensively infiltrated. The liver contained numerous soft secondary nodules. Bile duct slightly obstructed. Secondary cancer of lungs.

Dr. Johnston thought it difficult to say whether the disease originated primarily in stomach or in pancreas. No definite ulcer or nodule, looking like a starting-place could be discovered. The surrounding infiltration might afford some clue, as this infiltration was much more directly continuous with the growth in the pancreas than with that in the stomach.

Cancer of Œsophagus.—Dr. Ross showed an œsophagus the seat of malignant disease. The symptoms during life were marked and gradually increasing difficulty in deglutition. The stricture admitted a No. 3 bougie. There was no marked emaciation. The patient had died suddenly and unexpectedly, death being due to the bursting of a cerebral abscess. There were no symptoms of brain disease.

Autopsy by Dr. Johnston.—Epithelioma of œsophagus; forming ulcerated surface five inches long. Calibre of gullet not much narrowed. In brain, an abscess was found just above the roof of right lateral ventricle, at its anterior and external part, anterior to the motor area. This had burst into the lateral ventricle. Abscess appeared chronic in nature ; did not appear to be connected with the cancer.

Stated Meeting, December 3rd, 1886.

J. C. Cameron, M.D., President, in the Chair.

Case of Leukœmia.—Dr. Stewart showed a man, aged 32 years, who is suffering from enlargement of the cervical, axillary and inguinal glands. The patient, who is a farmer, first noticed a swelling under his left lower jaw nine months ago. The glands along the sterno-mastoids and above the clavicles are very much enlarged. The swelling is painless, and in some parts has a semi-fluctuating character. Several glands in both axillary regions are the size of hen's eggs. The groin glands are much enlarged also. The patient also complains of weakness, with palpitation and breathlessness on exertion. He is decidedly anæmic. He never had any previous illness. Has lost three sisters from pulmonary consumption. There is no evidence of enlargement of the bronchial or mediastinal glands. His breathlessness can be accounted for by his anæmia, and the pressure exerted by the enlarged cervical glands on the trachea. There is no enlargement of the thyroid glands or tonsils. No pain, tenderness or swelling over any of the bones. *Blood*—Dr. Wyatt Johnston kindly undertook the examination of the blood. It is as follows: "Red corpuscles are well formed, uniform in size, and nummulate normally. White are considerably increased in number. There are numerous small colorless cells (blood plaques ?). On staining the blood (Ehrlich's hæmatoxylin eosin method), the leucocytes are seen to be mostly small and with mono-morphic nuclei. A very few eosinophile cells and one or two nucleated red corpuscles noticed, but both these elements are very infrequent. By Gowers' hæmocytometer, red cells 3,570,000 per c.m. (71 per cent. of normal); white cells, 200,000 per c.m. Proportion of white to red, 1 to 20 (an increase absolutely of 13 times and relatively of 15 times the normal). Hæmoglobin index 58 per cent." *Spleen* —There is a considerable increase in the size of the spleen, its vertical dullness extending from the upper border of the ninth rib downwards a distance of five inches. Its surface is smooth. *Liver* is also somewhat enlarged, its vertical dullness (in the line of the nipple) reaching from the fifth rib to two inches below the ribs, a distance of six inches. During the last two or three weeks he has been complaining of a dull, aching pain over the lower part of his back. There is no pain or œdema of the lower limbs. Nothing abnormal to be detected in the abdominal cavity.

Remarks.—The case presents some difficulty in diagnosis. Its marked clinical features are the hyperplasia of the superficial lymphatic glands. So marked is this enlargement that at first sight one would be inclined to at once come to the conclusion that it is a case of Hodgkin's disease. The very considerable increase in the number of white-blood cells, together with the increase in size of both spleen and liver, make it more probable that the case is one of lymphatic leukæmia. Osler, in his article on leukæmia in "Pepper's System," says that when the white cells increase to such an extent as to bring about a proportion of one white to fifty red, then we have to do with leukæmia. He draws particular attention, however, to the variableness of this proportion from day to day. A case, therefore, might be diagnosed one day as lymphatic leukæmia and another day as Hodgkin's disease, if we were to rely solely on the proportion which the cellular elements of the blood bear to each other. There are cases, and the one exhibited belong to this class, where it takes some time to come to a conclusion whether we have to do with lymphatic anæmia or Hodgkin's disease. Is it possible that a case of Hodgkin's may end in what we call lymphatic leukæmia ?

DR. BELL referred to cases which he had seen in hospital. Cases of Hodgkin's disease lived many years ; those of leukæmia died within two years. He thought the present one a case of leukæmia in an early stage.

DR. SHEPHERD spoke of difficulty in diagnosing between Hodgkin's disease and scrofulous glands of the neck.

DR. A. LAPTHORN SMITH referred to a case of *Torticollis*, previously shown, saying that a history of syphilis had been found. He also exhibited a case of doubtful psoriasis following vaccination. The eruption came out a year ago, soon after the patient had been vaccinated.

DR. SHEPHERD regarded the case as one of eczema.

DR. MILLS said that the case was of interest, because of the recent evidence that lymphatic glands are producers of red blood corpuscles, and this case would support it from the pathological side.

Case of Leprosy.—DR. SHEPHERD exhibited the case, occurring in a man aged 19, a native of Trinidad. He had a well-marked tubercular eruption on the face and hands, and a copious macular eruption on the legs and buttocks. The maculæ were of the size of ten cent pieces, of a bronzed color, and showed some infiltration. The fingers of both hands were crooked and swollen, and patient could not use them. The claw-like appearance of the hands was very marked. Large bullæ were seen on the hands and wrists, which when evacuated left troublesome ulcers. The patient's face was very characteristic of leprosy, the thickened tissues, dull expression, and tubercular nodules, also loss of eyebrows, and injected conjunctiva, gave the individual an appearance *sui generis*. There were also a number of anæsthetic patches, viz , on the inside of each thigh with atrophy of the skin on right elbow, and on dorsal surface of fingers and toes. The anæsthetic patches have only appeared within the last year. The right ulnar nerve could be easily felt, and was slightly enlarged. The mucous membranes were not affected. The patient had been in this country four years and had been treated for syphilis; he came to Canada by the advice of physicians who thought his disease would improve in a colder climate. He was affected with the disease two years before he left Trinidad ; the eruption was then principally on the chest, and disappeared with the use of chaulmoogra oil internally and externally. He said the disease is common in Trinidad, and exists chiefly among the Portuguese. There was no history of leprosy in his family. Dr. Wyatt Johnston had excised one of the tubercles on the nose and had obtained from it the bacilli of leprosy in abundance, a beautiful preparation of which was shown.

DR. MILLS said that in the skin, as in the eye, it had been demonstrated that blind spots occurred, and thought it would be interesting to see if these corresponded with the anæsthetic areas in leprosy and in other pathological conditions.

In answer to DR. SMITH as to whether the disease was contagious, DR. SHEPHERD said that, like syphilis, it was inoculable, but not contagious. Leprous men have lived for twenty years without conveying it to their wives. It was hereditary, usually skipping a generation. Great diversity of opinion exists as to the contagiousness and the heredity of the disease. This is well shown in the reports from the different leper stations.

Cases of Cancer of Pylorus.—DR. JOHNSTON showed two specimens. The first was from a woman aged 49, a patient of Dr. T. A. Rodger. She always was dyspeptic. A distinct tumor was felt in the right hypochondriac region about a year ago. Symptoms of gradual exhaustion were experienced, accompanied by dilatation of the stomach. At the autopsy, the pylorus was found involved for 2½ inches in a scirrhus growth, lumen still admitting little finger readily ; three small ulcers with infiltrated edges were situated near the ring ; hyperplasia of mucosa in region of pylorus to a distance of five inches from ring ; walls of stomach hypertrophied ; cavity not markedly dilated ; no infiltration of tissues in neighborhood ; no secondary growths anywhere. The second case was from a man aged 50, a patient of Dr. Geo. Ross. The stomach was enormously dilated ; pylorus was involved in a dense cancerous mass, wall greatly thickened, and lumen narrowed, only admitting a No. 8 catheter ; a little infiltration in neighborhood, but no compression of bile ducts and no secondary cancer ; walls of stomach at fundus not so thick as in preceding case.

Dr. Ross stated that his patient's symptoms were those of excessive dilatation of the stomach, requiring the stomach tube to get relief. At the autopsy, a quantity of fibrous pulp was found within the stomach, being the remains of some oranges patient had eaten some time previously. He thought the clinical distinction between this case and the preceding one was accounted for by the much greater degree of constriction at pylorus.

Dilated Stomach.—Dr. Bell reported a case of dilatation of stomach caused by fibrous constriction of an inflammatory origin at pylorus. An abscess filling lesser omentum had burst and caused fatal general peritonitis. It communciated with the stomach through an ulcer in the pylorus. He thought the disease began as the result of an injury to abdomen received in a fall eighteen months before, and that the patient's life would have been saved by an operation proposed to him, but refused.

Bifid Meckel's Diverticulum.—Dr. Johnston showed a case of Meckel's diverticulum ilei having a bifid extremity. He did not know of its having any anatomical significance.

Dr. Shepherd stated that this was the first example he had seen of a bifid Meckel's diverticulum.

Extreme Dilatation of the Heart.—DR. JOHNSTON also exhibited a specimen of extreme dilatation of the right side of the heart, from a man aged 40. The right chambers contained 27 ounces of blood and a soft clot. Tricuspid orifice measured 9 mm. in circumference. Pulmonary orifice slightly dilated; valve competent; other valves normal. Dilatation of left ventricle only trifling. No hypertrophy of heart wall and no marked degeneration of the muscle. Patient had also right-sided chronic tubercular pleurisy with dense fibrous exudation and acute uniform miliary tuberculosis of both lungs in an extreme grade in connection with the arterioles. The case was considered puzzling as to causation. No caseating mass was discovered anywhere, and no communication of any such mass with the veins or thoracic duct. The adhesions could not embarrass the circulation in any way unless by interfering with the contraction of the right auricle. He thought the obstruction to pulmonary circulation in arterioles would have aggravated the dilatation of the right heart.

DR. GEO. ROSS said the clinical history was that of an acute pleurisy four months ago not well recovered from. A prominent feature was the marked heaving pulsation in epigastrium.

DR STEWART thought that the above explanation did not account for so extreme a dilatation. The patient might previously have had parenchymatous changes in his heart muscle which were not now to be recognized.

Puerperal Cerebral Embolism.—DR. ROSS exhibited specimens from a case in which an abortion was followed three months ago by embolism of left Sylvian artery, causing right hemiplegia with aphasia. A presystolic murmur existed. The autopsy by Dr. Johnston showed extensive warty vegetations, but no sclerosis of mitral valve. The left Sylvian artery was obliterated and transformed into a fibrous cord. There was softening of the left corpus striatum and internal capsule.

DR. SHEPHERD thought the embolism was excited by fibrous condition of the blood at parturition. He had reported a similar case to the Society, with embolism at three successive labors.

Tuberculous Disease of Bladder and Kidney.—DR. JOHN-

STON exhibited for Dr. Bell specimens from the case of a boy aged 19, where a cystotomy wound had remained unhealed. Death followed in one year with symptoms of pyelo-nephritis. Autopsy showed old tubercular disease of right kidney and ureter; the bladder was nearly free from disease, but prostate was extensively involved. The granulations of the wound were tubercular, and sections showed tubercle bacilli in them. The other kidney and ureter were healthy. The lungs showed acute tuberculosis.

DR. BELL said the patient had chronic disease of knee-joint, apparently tubercular.

Tait's Operation.—DR WM. GARDNER exhibited the uterine appendages removed from two patients during the past three weeks. In the first case the ovaries were cirrhotic and densely adherent behind a retroflexed uterus. Free bleeding followed the separation of the adhesions, treated by the drainage-tube. The patient had been an invalid for fourteen years from pelvic pain and profuse and painful menstruation, with severe headaches. She is slowly recovering. In the second case, both ovaries were enlarged and cystic, the left the size of a hen's egg; no adhesions. The symptoms were profuse and painful menstruation and constant pelvic pain. Patient recovered without a single bad symptom. In both cases the abdominal incision was an inch and a half in length only.

Dr. Gardner also reported that a lady on whom he had performed ovariotomy in the fourth month of pregnancy had been confined a week ago, at full term, of a male child weighing ten pounds. The patient was the mother of two children, and had suffered for many years from cough, hæmoptysis, and purulent expectoration. The labor was of six hours' duration. It was followed by inertia of the uterus, with alarming hemorrhage. She is now recovering without any complication. The cough and expectoration continue. Dr. Gardner remarked that operative measures were much preferable and safer than the old treatment of tapping the tumor or bringing on premature labor.

DR. TRENHOLME asked for the symptoms which led to the operation.

Dr. Gardner replied—Intense pain in pelvis and back, vomiting, and headache. Last pregnancy fourteen years ago, and suffered ever since. Patient was very neurotic.

Dr. Mills read a paper upon "The Cause of the Heart-beat and other Problems in Cardiac Physiology." (*See January number, page* 321.)

Dr. Armstrong congratulated Dr. Mills upon having performed so important a service to science in doing this original work, and also congratulated the Society in being able to receive so valuable a paper.

Dr. Stewart had until now always cherished hard feelings against Mills, Gaskell and the others who had recently overthrown the old cardiac physiology which had appeared so complete. In studying the action of drugs the new researches had had a most unsettling effect upon his views, but he thought that when the theories advanced by Dr. Mills were formulated the matter would be put on a sound and at the same time simple and comprehensible basis.

HURON MEDICAL ASSOCIATION.

Stated Meeting, Jan. 11*th*, 1887.

Meeting Held at Seaforth, the President, Dr. J. Campbell, in the Chair.

Floating Kidney.—Dr. Graham of Brussels read a paper on "Floating Kidney," and presented a patient before the meeting. The patient was a lady in the middle period of life, who had consulted Dr. G. for a swelling in the situation of the right kidney. She had complained much of dragging pains, loss of appetite, and dyspeptic symptoms. She had vomited often, suffered from marked debility, and labored under bronchitis. There had been great irritability of the bladder, but the uterine system was healthy. After several medical men present had examined the patient, they expressed themselves as entertaining no doubt, from the position, size, feel and mobility of the tumor, and from the condition of the other organs, that the case was one of movable or floating kidney. The treatment as outlined by Dr. Graham was approved of, viz., to treat the symptoms as they arise, such as indigestion, anæmia, phosphaturia, etc., advising the patient to refrain from straining or violent exercise, and applying an elastic bandage or truss with a well-fitting pad in the region calculated to retain best the misplaced organ.

Ichthyosis.—DR. CAMPBELL of Seaforth presented a case of ichthyosis, which was examined by those present. The disease was in the form known as xeroderma, the skin being harsh, rough, dry, and a large surface covered with bran-like scales. The treatment recommended was by alkaline baths, followed by glycerine unctions or by tarry applications to check cell growth.

Enlarged Testicle.—DR. SMITH of Seaforth brought before the Association for examination an interesting case of a young man apparently in good health, but having an enlargement of the left testicle. The slightest pressure on the affected testicle excited most painful spasms, and continued manipulation rendered the organ most sensitive, so that the slightust touch would cause him to cry out. Directing the patient to lie with his face downwards, pressure along the spinal column caused no pain, until the two lower dorsal vertebræ are reached. Slight pressure here caused spasms of the left side. This had been thought to arise from the abnormal condition of the testicle. He had been treated with large doses of pot. brom. combined with pot. iodid. The question arose as to whether there was likely to be malignant disease of the testicle, but the length of time since he had first noticed the enlargement (four years) rendered this improbable. It was thought better to continue the treatment as above, and not resort to operative measures at present. Electrolysis was mentioned as likely to be useful in the case.

Ulceration of the Leg.—DR. WORTHINGTON of Clinton presented an intractable case of ulceration of the leg in an old gentleman, for which the persistent wearing of a Martin's bandage was recommended.

Case in Practice.—DR. ELLIOTT of Brucefield mentioned a case which had recently occurred in his practice, in which a miscarriage was taking place, but the uterus being slow to throw off its contents, he had injected hot water at a temperature of 120°F. into Douglas' cul-de-sac, with the result that uterine contractions were excited, so that the ovum was expelled without further delay.

Enlarged Spleen.—DR. NICHOL of Bayfield reported a case diagnosed as enlargement of spleen, occurring in a man aged 50, which he had first seen in July last. The treatment pursued had been all that was recommended in those cases, but nothing seemed to be of any avail, and the patient died six months after the enlargement was first noticed. The enlargement reached to within a finger-breadth of the pubis, and about two inches over the median line of the abdomen.

DR. SMITH, who had seen the case, agreed with Dr. Nichol's treatment, but expressed regret that a post-mortem examination was not allowed.

DR. GRAHAM recollected a somewhat similar case, in which those who saw it diagnosed splenic enlargement, but the post-mortem showed that it was a case of spindle-shaped sarcoma of the kidney.

Cancer of the Pylorus.—DR. SMITH read the notes of a case of dilatation of the stomach arising from cancer of the pylorus. The patient was aged 54 years. Eleven years previously had been affected by what had been diagnosed as cancer of the stomach. At that time there was pain, anorexia, nausea, vomiting and finally hemorrhage. Suddenly, however, a remission in his symptoms occurred, and he seemed gradually to improve. For ten years he has been able to attend to business, never complaining of anything but occasional attacks of indigestion. Suddenly last month there was a return of all the symptoms of eleven years ago, with the exceptlon of the pain. Nothing controlled the vomiting and nausea, and the patient rapidly sank and died of exhaustion. An interesting post-mortem revealed the fact that a scirrhous growth was involving the pylorus and causing stenosis of that orifice, which was reduced to the size of a small pencil. The stomach measured 30 inches in length along the greater curvature, and a straight line from cardiac to pyloric orifice was 19¼ inches. Coats of stomach were found free from ulceration. A fact of interest was that the diagnosis made eleven years previously was verified by the post-mortem. The sudden remission of the symptoms is not an unusual occurrence in cancer of the stomach, but these symptoms generally return within a year. In this case reported, everything went to show that the disease had been diagnosed correctly, and that for some reason the progress of the disease had been arrested or retarded.

Resolution of Condolence.—A resolution of condolence expressing sympathy with Dr. W. Sloan of Blyth in the sudden death of his son, Dr. A. M. Sloan of Listowel, was carried.

Election of Officers.—The election of officers resulted as follows: President, Dr. W. Graham, Brussels. Vice-President, Dr. Young, Londesboro'. Secretary, Dr. Smith, Seaforth. After passing complimentary resolutions to the retiring officers, the meeting adjourned.

TORONTO MEDICAL SOCIETY.

Stated Meeting, Jan. 6th, 1887.

THE PRESIDENT, DR. MCPHEDRAN, IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. TEMPLE showed the uterine appendages, removed on account of purulent salpingitis of both tubes. The patient, aged 33, had been married eleven years, was never pregnant, and began to suffer one year after marriage. During the last year she was almost constantly confined to bed, as any exertion caused severe pain in the pelvis, lasting several days, probably due to circumscribed peritonitis. The patient was thin, and the abdomen was enlarged equal to the fifth month of pregnancy. On examination, the uterus was found to be pushed forwards and upwards, so that the cervix could be felt with difficulty behind the symphysis pubis. The Douglas cul-de-sac was filled with a fluctuating mass. The right tube could be accurately mapped out by bimanual palpation; the left could not be so well outlined. On opening the abdomen, the mass presented the appearance of a fibro-cyst. The structures were greatly matted, the adhesions being separated with difficulty. The right tube burst during separation and about 8 oz. of pus escaped into the peritoneum. The right ovary was removed—the left could not be found. It had probably become absorbed from pressure. The patient made satisfactory progress, the temperature not exceeding 101°F., usually varying from 99° to 100°.

Dr. Ross exhibited a placenta from a case of twin pregnancy in which the cords, which were attached to the placenta very close together, were inextricably knotted. Death of both fœtuses had occurred, evidently some days before birth. One of the children was hydrocephalic, and it was found necessary to puncture the head before delivery could be effected.

Dr. McPhedran presented a stomach, etc., from a case of carcinoma of the œsophagus for which gastrostomy had been done. He first saw patient (a woman aged 41) in April 1886. She had then been suffering from some pain in the chest and mid-dorsal region for about four months, with increasing dysphagia. Exploration revealed a constriction of the œsophagus 11 inches from the superior dental arch. From May 1st there was complete inability to swallow even ʒj of water. A large amount of clear mucus was regurgitated daily, with occasionally a little blood. She also had frequent hemorrhages all summer. She was nourished through an œsophageal tube until June, when the stricture only admitted a No. 8 catheter, and became so painful that operation was advised. The preliminary operation was done July 11th, and the stomach opened on the 21st. She improved greatly in flesh and strength, and was able to walk and drive out from July to October. There was considerable trouble from leakage around the tube in the fistula, otherwise the operation met the object aimed at perfectly, viz., the relief of hunger and thirst, first and most important, and, secondarily, the prolonging of life. She began to fail in November, was confined to bed most of December, and became rapidly worse. Cough and dyspnœa became troublesome, and she died on the 28th of December, six months and eighteen days after operation.

Post-mortem.—The stomach was found dilated and extending two inches below the fistula, which was situated one inch from the pyloric opening. The proximity of the fistula to the pylorus doubtless accounted for the troublesome leakage. The lower five inches of the œsophagus was disorganized and converted into a cavity containing foul grumous material. The surrounding parts were adherent. The aorta showed invasion of the disease on its inner surface. The back parts of the lungs were in an advanced stage of hypostatic pneumonia, which was the immediate cause of death.

Remarks.—With the division of the operation into two stages, it is not a dangerous one if resorted to before prostration is advanced. The securing of the stomach with harelip pins was resorted to on account of ease combined with efficiency. The stomach should be drawn as far as possible to the right, so that the fistula will be at the greatest possible distance from the pylorus, as there will thus be less liability to leakage. It would be better not to retain the feeding tube in the fistula constantly, but to introduce it when food is to be given. Of late years the death rate from this operation has been greatly reduced. Of 13 cases operated on by Knee of Moscow, 10 recovered and 3 died—one from bleeding, one from perforation of a bronchus, and only one from prostration.

Stated Meeting, January 13th, 1887.

THE PRESIDENT, DR. MCPHEDRAN, IN THE CHAIR.

Arsenic in the Treatment of Skin Diseases.—DR. GRAHAM read a paper on this subject. He first considered its negative aspect, quoting Drs. Fox, Hardway and others as holding the opinion that in *some* forms of skin disease, principally those of an inflammatory nature, arsenic was not simply useless but positively harmful. From the positive point of view, the writer of the paper dealt with the effects of arsenic on the skin in causing degeneration and partial dissolution of the protoplasm of the cells. The epidermis separates and desquamates, and the cells of the Malpighian layer are loosened and separated from one another ; in short, arsenic causes a mild inflammation of the skin, hence it is contra-indicated in acute affections. In small doses it beautifies the complexion, but if given freely it may cause a brown discoloration ; bullous eruptions have also been attributed to the use of arsenic. Part of the beneficial action of arsenic may be due to its action as an oxygen-carrier, arsenious acid having the property of absorbing oxygen to form arsenic acid, and then returning to its original form by giving up the oxygen. The author had found arsenic to be very useful in psoriasis guttata, not so good in psoriasis diffusa, and positively harmful in the congestive form of this disease. In eczema it is not of such general use, as it is injurious in acute cases, though it is of some service in the chronic forms with scaling. Though children bear comparatively larger doses of arsenic than adults, they are more liable to pneumonia and bronchitis from its use than adults. When the eczema is malarial in origin, the arsenic may be given with much benefit and in more acute cases. Hutchinson reports 26 cases of pemphigus chronica cured by arsenic. It is, however, useless in the foliaceous form of this disease. It is useful in chronic urticaria and erythema nodosum. Benefit will follow its use in alopecia following typhoid fever and syphilis, but not in alopecia areata. Acne indurata is benefited. In the malignant diseases of the skin, such as multiple sarcoma and epithelioma, arsenic is very useful, especially in the form of Donovan's solution.

Discussion.—Dr. Reeve had found arsenic useful in the furuncular habit in patients so affected.

Dr. Sweetman had used it with marked benefit in two cases of keloid.

Dr. Ghent related a case of psoriasis of nine years' standing which had been cured by giving a course of brisk purgatives, extending over a period of three weeks, and followed by a tonic of ferri carb. and port wine. Pot. chlor. was also given freely. The external treatment consisted in a wash of pot. carb. to dissolve the crusts, followed by the application of thick rice water, which formed a thin wax-like or gelatinous layer which excluded the air. Complete cure took place in about two months.

—The General Council of Medical Education and Registration have decided to recognize the preliminary examinations of the Ontario College of Physicians and Surgeons.

CANADA
Medical and Surgical Journal.

MONTREAL, FEBRUARY, 1887.

THE FUNCTION OF THE SUPRA-RENAL BODIES.

If Hoppe-Seyler's work had never gone beyond blood-pigments the medical and scientific world would have owed him a debt of lasting gratitude. He has laid in chemistry the sure foundations on which others have refined and in some instances improved. Great advances have of late been made by means of the micro-spectroscope, with which the names of Sorby and McMunn are especially associated.

McMunn's statements are very novel, and we think some of his experiments need repetition; but, unquestionably, the field is wider than it was once supposed, and there is much still to be discovered.

Kühne pointed out that the red color of muscles was owing to *hæmoglobin*. McMunn maintains that while the majority of voluntary muscles do contain hæmoglobin, in most cases it is accompanied by *myohæmatin*, in others the latter replaces hæmoglobin, and in some only hæmoglobin is found.

The heart-muscle invariably yields myohæmatin. This body has a characteristic spectrum obtained only on pressing out the tissue to great thinness. There are three bands visible: the first just before D, the next two between D and E. When the oxy-hæmoglobin bands are well marked they cover and are merged into the myohæmatin bands, which accounts for the latter not having been seen before. This pigment has been found not only in the muscles of Mammals, but also in those of Birds, Reptiles, Batrachians and Fishes. Myohæmatin is a respiratory substance.

Considerable interest attaches to the study of pigments as recently carried on from the light which, according to McMunn, is thrown on the function of the supra-renal bodies,—a standing puzzle in physiology if not also in pathology. According to this investigator, in the supra-renals of man, the cat, dog, guinea-pig, rabbit, ox, sheep, pig and rat, the spectrum of *hæmochromogen* (reduced alkaline hæmatin ?) may be obtained from the medulla, while the cortex shows that of a *histohæmatin*. The histohæmatins are respiratory pigments, with spectrum very like that of myohæmatin.

Hæmochromogen in a vertebrate body is always probably *excretory*. It has been found in both the bile and the liver. "Hence, and owing to the darkness of its bands in the medulla of the adrenals, it must be looked upon here as excretory; if so, *the function of the adrenals must be* (*at least in part*) *to metamorphose effete hæmoglobin or hæmatin into hæmochromogen";* if from disease, or after removal, as in Tizzoni's experiment, the effete pigment is not removed, pigmentation of the skin and mucous membranes may take place.

According to Vulpian, taurocholic acid is found in the medulla of the adrenals; further, there is considerable resemblance in the structure of the supra-renal bodies to that of the liver and the large lymphatics, which, taken in connection with the well-known results of Addison's disease, go to show that an active metabolic process is taking place in them. McMunn therefore concludes that these bodies have a large share in the downward metamorphosis of effete coloring matter. Certainly such observations throw at least some light upon a hitherto dark subject in both physiology and pathology.

THE TREATMENT OF CHRONIC DISEASE OF THE LUNGS AND AIR PASSAGES BY MEDICATED GASEOUS ENEMATA.

Dr. Bergeron of Lyons has introduced a method of treating chronic tuberculosis and other diseases of the lungs which promises to yield excellent results. It consists in the introduction into the rectum of sulphuretted hydrogen gas impregnated with carbonic acid gas. Imbued with the bacillary views of the day of the origin of tuberculosis, he has been experimenting for some time with various antiseptic agents, endeavoring to find some one among them that possessed the power of killing the microbes and at the same time that would be innocuous to the system. In this search he was unsuccessful until he discovered the power of sulphuretted hydrogen gas when introduced into the rectum. When this gas is injected into the general circulation it acts as a powerful poison, but when introduced into the rectum it is absorbed into the venous system and rapidly and entirely eliminated by the lungs. The elimination commences almost immediately, and is rapidly completed. Cases of pulmonary phthisis treated in this way soon improve, and simultaneously there is a diminution in the number of tubercle bacilli, but the author does not claim for his treatment that it acts as a microbicide. It is well known that sulphuretted hydrogen is a powerful destroyer of the lower organisms, and it is unlikely that it acts otherwise than as a microbicide. Dr. Bergeron uses the natural sulphuretted hydrogen gas of certain mineral waters in preference to the artificial gas, on account of the pain induced by the latter when driven into the intestinal tube.

Dr. J. Henry Bennett gives a full account of Bergeron's treatment in the *British Medical Journal* for Dec'r 18, 1886, and from a short experience of it he is strongly inclined to believe that it is a very important advance. If so, it will be another illustration of the benefits derivable from comparative experimental pharmacology.

Obituary.

JOSEPH MORLEY DRAKE.

It is a painful duty to have to speak of the death of this, our honored and respected colleague and *confrère*, but it is, indeed, a pleasure to recal the features of a life which was a very noble, though an arduous one. Dr. Drake was entirely a self-made man, but he won for himself in his adopted country a place of which any one might be proud, securing at the same time such universal love and respect as falls to the lot of few. He has gone to his rest, leaving behind him an example of energy, perseverance, uprightness, and conscientious discharge of duty, associated with a gentle, kind and charitable spirit, which produced the natural fruits of regard and attachment.

Dr. Drake was born in London, England, in the year 1828. In that city he received a course of chemistry at the Polytechnic

Institution, and was certified as an analytical chemist at the early age of 17. He came to this country in 1845, and obtained employment as a druggist, first with Dr. Godfrey and subsequently with Carter & Co. and with Mr. S. J. Lyman. Whilst thus engaged he entered upon the study of medicine, and graduated at McGill University in 1861, obtaining the highest honors the Faculty could bestow. He was immediately appointed House Surgeon of the Montreal General Hospital, a position which he held for eight years, possessing the unlimited confidence of the Board of Governors, and being the trusted assistant of the medical staff. In 1869 he entered practice in this city; from the important public position he had held, his abilities were well known, and he at once obtained a large and influential *clientèle*. His kind and sympathetic nature, combined with medical talent of a high order, made him the trusted adviser of all those who were fortunate enough to secure his services. The Faculty of McGill University recognized in him one who possessed all the elements of a successful teacher, and very soon promoted him from the office of Demonstrator of Anatomy, which he already held, to be Professor of Clinical Medicine. His natural abilities, aided by his great hospital experience, made him thoroughly at home in this new sphere of labor. He was a thorough diagnostician, and many a good practitioner at the present day owes much of his success to the lessons learned in the wards from Dr. Drake. After a few years, the chair of Physiology became vacant by the death of Dr. Fraser, and Dr. Drake preferred to take up this branch. Here, again, the many-sided possibilities of the man showed themselves, and he delivered a course of lectures upon that difficult subject, which was highly appreciated. Soon—all too soon—it was evident to his friends that he was working beyond the limits of his physical strength. He was known to have valvular disease of the heart, and began to suffer at times severely. He was, however, a brave man, and he defied physical suffering and toiled at an arduous practice and at his teaching work when many a strong man would have acknowledged himself beaten. At last, though, to the sorrow of his colleagues and the hosts of friends who surrounded him, all had to be laid aside. He retired quietly to Abbotsford, near Montreal, where a home had been provided for his aged mother, and there died quietly on the 26th December, 1886.

Possessed of great natural abilities, of strong literary tastes, and with a passionate attachment to the medical profession, his career was a strikingly successful one. But there were qualities in the man himself which developed a remarkable and universal personal attachment—his colleagues always speak of him in the most affectionate terms—his former patients contiuue to deplore his departure as an individual affliction—while the citizens at large feel that his loss made a blank not easily filled.

A sound, careful and enthusiastic practitioner of medicine—a successful teacher—a whole-souled friend—a man abounding in the true spirit of charity—gentle, affectionate, high-spirited, honest and honorable—has gone from amongst us. *Requiescat in pace.*

—It is with deep regret that we announce the death of Dr. J. B. Johnston of Sherbrooke. After a prolonged illness, he died quite unexpectedly on the 2nd of January, at the ripe age of 74. Dr. Johnston was one of the oldest practitioners in the province, and though of late years he had retired from active practice, his life was both a busy and a useful one. After taking his M.D. degree from Edinburgh University in 1833, and spending some time in the hospitals of London and Paris, he came out to Canada, and in 1845 began practice in Sherbrooke. From that time to 1878 he was actively engaged in the practice of his profession. His superior training as a physician und his good judgment, together with an unusual capacity for work, caused his early recognition by the profession ; indeed, almost from the outset of his career he was one of the best known and most respected practitioners in the province. Dr. W. G. Johnston, Demonstrator of Pathology in McGill, is his only child.

—It is with deep regret that we record the death of Dr. Andrew McCaa Sloan of Listowel, at the early age of 27 years. He was one of the most promising young practitioners in western Ontario. His father, Dr. Sloan of Blyth, has in his great affliction the deep sympathy of his many professional friends.

Personal.

—Dr. R. P. Howard, Dean of the Medical Faculty of McGill University, has been made an Associate Fellow of the College of Physicians, Philadelphia.

—Mr. H. B. Dixon, of Balliol College, Oxford, succeeds Sir Henry Roscoe as Professor of Chemistry in Owen's College, Manchester.

—Dr. Charles E. Casgrain of Windsor, a graduate of McGill University (1851), has been appointed to fill one of the vacant senatorships.

—Dr. J. B. Gibson, who graduated in McGill in 1866, has been appointed Medical Superintendent of the Mary Fletcher Hospital, in Burlington, Vermont.

CANADA

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DUODENAL ULCER.

CLINICAL AND ANATOMICAL CONSIDERATIONS BASED ON NINE CASES.

By William Osler, M.D.,
Professor of Clinical Medicine in the University of Pennsylvania.

(*Read before the Philadelphia County Medical Society.*)

The solitary ulcer occurs more frequently in the duodenum than in any other portion of the intestine, and in its ætiology and morbid anatomy is almost identical with the gastric ulcer. It is rarely met with below the bile papilla, at which point the acid chyme is neutralized. Blood stasis in a circumscribed area of the mucous membrane is the condition which permits of erosion by the gastric juice. Although the cases are few in number in which actual disease of a vessel has been discovered, they confirm in a striking manner this view. Thus Merkel* found an embolus in a duodenal vessel at the base of an ulcer, and there were emboli in other organs; similar cases have been reported of plugging of the arteries at the base of ulcers of the stomach. Thrombosis is also a cause, leading first to hemorrhagic infiltration and inducing a condition which permits of erosion. The experimental production of gastric ulcer by Cohnheim and others lend additional support to the embolic view. The following case suggests that in the duodenum there is possibly another mode in which ulcers may arise :—

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* Wiener Med. Presse, 1866.

CASE I.—*Phthisis; small ulcers in ileum; ulcers in cæcum and colon; an ulcer in duodenum half an inch outside pyloric ring; cyst of Brunner's gland.*

J. I., middle-aged man, died of phthisis in Montreal General Hospital. No special symptoms. The lungs showed cavities; the heart valves were normal. There were a few small ulcers in the lower patches of Peyer, and a number of small ulcers in cæcum and colon. Just outside the pyloric ring there was a loss of substance in the posterior wall of the duodenum 1.5 cm. in diameter. The base was smooth, the edges overlapped so that the actual diameter of the ulcer was much greater than was apparent. Not far from this there was a small dark spot, with a little depression leading into a definite cyst-like cavity in the submucosa the size of a large pea, which contained a thick turbid fluid. Brunner's glands were very distinct, but not more so than is often seen when the mucosa is thin, and not deeply congested.

The open ulcer with undermined edges had possibly resulted from the rupture of a cyst of a Brunner's gland similar to the one which existed in its vicinity. One can readily understand that under such circumstances the thin mucosa covering the cyst, undermined and separated from its blood supply, might be eroded, or, after bursting, the acid gastric juice might dissolve the thin edges. In debilitated persons, or in conditions of portal congestion, such a small erosion might not readily heal, but rather increase, and be the starting point of an ulcer. Brunner's glands are not often found diseased, but they belong to the racemose variety in which cystic dilatation of acini is not uncommon. They exist most abundantly on the first portion of the duodenum, the region most prone to the disease.

Duodenal ulcer is not so frequent as the ventricular. I am sure, from my own experience, that it would be oftener found if the stomach and duodenum were opened together, *in situ*, and the mucous membrane examined. If, as is so commonly done, the stomach is cut away just beyond the pyloric ring, the chances are that, if an ulcer is present, the incision passes through it. I have found nine cases in about one thousand dissections.

Males are more subject to ulcer of the duodenum than females.

Thus the combined statistics of Krauss,* Chvostek,† Lebert ‡ and Trier (quoted by Chvostek) give 171 cases in males and 39 females. Of the nine cases which I have noted, seven were males and two females. It occurs most frequently in middle age. One of my cases was in a child of twelve.

There are no constitutional peculiarities which predispose to duodenal ulcer. Chlorosis, which seems to favor the production of the gastric ulcer, has no special influence.

In the following case the ulcer may have been tuberculous, as there was extensive affection of ileum and cæcum :—

CASE II.—*Phthisis ; extensive ulceration of ileum, cæcum and colon ; single ulcer in duodenum ; slight jaundice.*

E. G., aged 23, died in the Montreal General Hospital with the usual symptoms of chronic phthisis. There were diarrhœa and abdominal tenderness, but no special features indicating ulceration in the upper part of the intestine. The autopsy showed cavities in both lungs. Extensive tuberculous ulceration of ileum, cæcum and colon, with recent peritonitis due to extension from the bases of the ulcers. In the anterior wall of first part of duodenum was a circular ulcer, a third of an inch in diameter, with clean cut edges and smooth base. It looked of recent origin. It did not involve the bile duct. There was congestion of the mucous membrane of the duodenum. There were no tubercles in the vicinity and no ulcers in the upper part of jejunum.

The ulcers in intestinal tuberculosis sometimes reach very high, and in a recent case at the Philadelphia Hospital there was an ulcer the size of a ten-cent piece at the upper end of the jejunum, not two inches from the duodenum. In *Case II*, although there were no signs of tubercle in the base of the ulcer, it may have been of this nature. In Krauss' 64 cases there were seven instances of ulcer in connection with phthisis.

Chronic valvulitis and atheroma of the aorta were present in only one of the nine cases.

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* Das Perfor. Geschwur im Duodenum, Berlin, 1865.

† Medizinische Jahrbucher, Wien. 1883.

‡ Die Krankheiten des Magens, 1878.

I have not met with a duodenal ulcer in death from extensive burns.

In all of the cases the ulcer was solitary, and occupied the first or horizontal part of the gut. The form was round in all, and the diameter ranged from half an inch to an inch and a half. The base was either the submucosa, the head of the pancreas, or thickened connective tissues. In *Cases III* and *IV* the ulcer had cicatrized. The edges were usually rounded and not undermined. Perforation into the peritoneum, which occurs so frequently, was not met with. Perforation of a duodenal artery occurred twice with fatal hemorrhage.

Two of the cases illustrate healing of the ulcer, one with and the other without alteration in the lumen of the tube.

CASE III.—*Typhoid fever; illness of fourteen days; perforation; peritonitis; cicatrix of ulcer in duodenum.*

A. B., aged 40, night-porter at Montreal General Hospital, had been ill for two weeks with typhoid fever, when perforation took place, and death followed in eighteen hours from acute peritonitis. The post-mortem showed extensive typhoid lesions and a perforated ulcer one foot from the ileo-cæcal valve. In the first portion of the duodenum, an inch from the pylorus, on the anterior wall, was a stellate cicatrix about three-quarters of an inch in diameter. There was slight puckering in the vicinity, but no narrowing of the gut. The heart and valves were normal. A few patches of atheroma on the aorta.

This illustrates the most favorable termination of an ulcer. Such cicatrices, according to some authors, are not uncommon. They have been so in my experience.

CASE IV.—*Phthisis; healed ulcer of duodenum, with stenosis of first portion; dilatation and hypertrophy of stomach.*

S. F., aged 35, had been in medical wards Philadelphia Hospital for six months with symptoms of advanced phthisis. He had on several occasions complained of gastric pain, and at times vomiting was a troublesome symptom; but attention was no specially directed to the abdomen.

Post-mortem.—Extensive pulmonary tuberculosis. Stomach moderately dilated ; mucous membrane thick ; muscular walls at least twice the normal diameter. Pyloric ring of normal size, a little firmer and thicker than usual. Duodenum, for three-fourths of an inch beyond the ring, normal and had a circumference of two and a half inches. Beyond this, at a distance of about one inch from the ring, there was a stricture admitting the top of the little finger. When slit open, it extended one and three-fourths inches, and measured one inch in circumference. The narrow portion reached nearly to the bile papilla. There was not much thickening of the coats at this part, indeed in places it was very thin, and the texture of the pancreas could be seen through the thin wall. Towards the stomach there was puckering and greyish-white cicatricial tissue. The ulcer appeared to have completely healed except at one small spot. There was pigmentation of the tissues of this portion of the bowel ; not much thickening of the contiguous parts attached to the stenosed portion. There had evidently been an extensive ulcer, which had healed and produced stenosis just as happens not infrequently in gastric ulcer when near the pylorus.

Cases are reported in which the ulcer has perforated the liver or eroded the portal vein or the hepatic artery. The following case, in which I performed the autopsy for Dr. Rodger, is remarkable, inasmuch as the ulcer perforated the gall-bladder, eroded the tissues in the hilus, and ultimately divided the right branch of the hepatic artery, from which the patient bled to death. There are four other instances in literature in which this occurred, and in the first published case of duodenal ulcer by Broussais (quoted by Chvostek) the hepatic artery was eroded :—

CASE V.—*Jaundice for more than three months ; repeated hæmorrhages from stomach and bowels ; large ulcer of duodenum ; perforation of gall-bladder ; erosion of right branch of hepatic artery.*

Mrs. R. S., aged 48 years, a stout, well-nourished person. The following notes have been furnished by Dr. Rodger, under whose care the patient was :

"She had been married upwards of twenty-four years, but never had been pregnant; menstruation had been regular, but had ceased about three years ago.

"The only illness of consequence that she ever had was about fifteen years ago, when she was laid up in bed for about six weeks, with what was called an attack of inflammation of the liver. No jaundice was perceptible at that time. Ever since, however, she has been troubled with dyspepsia, obstinate constipation, and more or less pain or feeling of discomfort in the region of the stomach. Her condition to-day (March 18th, 1879) is that of a person suffering from a well-marked attack of jaundice; skin and conjunctivæ deeply tinged; urine dark, and stools pipe-clay in color; tongue coated; loss of appetite; no increase of temperature. She states that she has not felt well all winter, but was always able to attend to her household duties.

"Patient came to my office for about four weeks, at the end of which time the symptoms had not improved.

"On April 24th, visited the patient at her house. Examination revealed no enlargement of the liver, and only slight tenderness on firm pressure over the organ. Heart and lungs healthy.

"Has noticed considerable blood at stool during the past few days, and fæces still pipe-clay in color. No hæmorrhoids. Dr. G. W. Campbell saw the case in consultation, and gave a very unfavorable prognosis, though the exact nature of the disease was doubtful.

"All treatment adopted proved of no avail; the patient rapidly became emaciated, and continued deeply jaundiced. Several severe attacks of epistaxis have occurred lately, and to-day (May 30th) has passed more blood than usual by stool.

"At 3 p.m., May 31st, commenced vomiting blood, and continued to do so frequently all afternoon, in spite of treatment. The hemorrhage from stomach and bowels became excessive, and death followed in a few minutes."

Autopsy.—Body that of a well-nourished, moderately stout woman. In abdomen, coils of intestines dark-colored from staining of mucosa; peritoneal layer smooth. Liver dark-colored; the ascending colon, the stomach and duodenum are closely adherent to the under surface of its anterior margin. Stomach duodenum, pancreas and liver removed together. Stomach dilated and contains dark-colored clots and remnants of food; mucosa dark and blood-stained, otherwise unaltered. Pylorus normal. Immediately outside its well-marked ring, in the upper and back part of the duodenum, is a large orifice 3·5 cm. in length and 1·5 cm. in breadth. It is partially blocked with clots, on the removal of which an oblong cavity is disclosed, occupying the under surface of the liver, in the position of the gall-bladder. The edges of the orifice are smooth and round, and the two fingers can be inserted into the cavity as far as the second joint. A good deal of thickening exists about the duodenum, where it is attached to the gall-bladder. Mucous membrane is not, however, puckered, and in the rest of its extent is normal. The following is the condition of the tissues in the hepatico-duodenal ligament: Portal vein uninvolved, normal in size. Common bile duct pervious, and can be traced down to the upper margin of the ulcer, where it appears to open; at least the probe-pointed scissors cut down freely and exposed the orifice at this situation, and it could not be further traced. It has probably been cut across by the ulcer. Walls are thickened. Branches in the liver normal. The cystic duct joins it by a small orifice, into which the probe can pass for 1·2 cm., and then meets with an obstruction on the wall of the sac. The hepatic artery, when slit up, is natural-looking; on following the branches, a probe inserted into the main division of the right branch, which passes backwards and outwards, enters the upper end of the gall-bladder, and on slitting it open the wall is seen to be ulcerated through in a space 3 by 2 m., and the vessel communicates freely with the sac. The gall-bladder was then exposed, and is found in a condition of ulceration. Only towards the upper part is there any trace of mucous membrane; in the rest of its extent the wall is rough, ulcerated, and, in places, sloughing. There is a deep prolongation towards the hilus of the liver, the tissue of which at this part is exposed and sloughing. It is here where the ulceration of the artery has taken place. The ascending colon, close to the flexure, is adherent to the gall-bladder, and between the two there exists a circular orifice of communication, 7 m. in diameter, with rounded edges.

Death not uncommonly takes place by gradual exhaustion, consequent upon repeated vomiting.

CASE VI.—*Symptoms of gastric ulcer for many months; progressive emaciation; large irregular ulcer just outside pyloric ring.*

W. W., aged 72, patient of Dr. Wilkins. Well-marked symptoms of ulcer, supposed to be gastric. Death took place slowly, after many months illness.

Autopsy.—Body much emaciated. In abdomen, peritoneum dull and lustreless; two pints of turbid fluid, mixed with lymph, removed. Stomach appears dilated. Œsophagus presents in its terminal part an oval area, 3·5 by 1·2 cm., from which the mucous membrane has been completely removed by the action of the gastric juice. In the centre a thin external layer alone remains. Stomach moderately dilated, and contains a dirty-looking, highly acid fluid. Mucous membrane pale; that of the fundus thin, owing to post-mortem solution. At the pyloric end it is thick, and present numerous mammillations. The pylorus is greatly narrowed, admitting only the top of the little finger as far as the root of the nail. On slitting open the ring and the duodenum, the following condition is observed: Pylorus not thickened; ring prominent, but not more so than is often seen. Immediately external to it is an irregular ulcer extending round the greater part of the circumference of the gut, and presenting an imperfect division into two portions, the larger of which occupies the lower part of the tube, resting upon the pancreas, the other being placed above and to the right. The extreme length of the ulcer is 3·7 cm., the breadth ranges from 6 to 13 m. The edges are round and somewhat undermined. The base is formed of firm fibrous tissue of a greyish-white color. Close to the lower edge there is seen, on the floor, a small nodular body, looking like the end of a closed artery. The mucous membrane of the duodenum near the ulcer is greatly puckered, particularly the upper part. The bile papilla is about 5 cm. below the ulcer.

Nothing of special note in the other organs beyond the atrophy of extreme emaciation.

The symptoms of duodenal ulcer are extremely variable and rarely distinctive enough to make the diagnosis more than probable. In very many cases the process is latent, and the first symptom may be hemorrhage or peritonitis from perforation. In others the ulcer is accidentally found post-mortem, and has had no apparent influence in the course of the disease from which the individual has died, as in the following instance :—

Case VII. — *Spinal curvature ; bronchitis, pulmonary collapse ; ulcer in first portion of duodenum ; no symptoms.*

M. G., a boy aged 12, admitted to the Montreal General Hospital in March, 1877, with bronchitis. He had great deformity of the spine, with contraction (vertical) of the thorax. He became very cyanotic, and died in about a week. There was intense bronchitis, with splenization of lower lobes of the lungs. The right ventricle was large and the walls thick. The valves on both sides were normal. The mucous membrane of stomach and intestines was congested ; in the jejunum the edges of the valvulæ conniventes were in places ecchymosed. In the first part of duodenum, one and a half inches from the pylorus, there was a punched out ulcer in the posterior wall, about 1·5 centimetres in diameter. The edges were well defined, the base made up of the muscular layer, and there was no special thickening in the neighborhood.

In essential details the symptoms of the duodenal are identical with those of the gastric ulcer. There are, however, certain peculiarities. Dyspepsia is not so constant a feature in duodenal ulcer, and may not amount to more than a slight feeling of uneasiness some time after eating. In Chvostek's list of cases collected since 1865, there were 44 in which this symptom was specially referred to, and of the entire number only 16 had loss of appetite and uneasiness after eating.

Vomiting is a variable symptom, and was only present in one-fourth of Chvostek's list of cases. Usually it occurs at the end of attacks of severe pain.

Hemorrhage is a common symptom, occurring in a third of the cases, and the blood may be either vomited or passed in the stools, or appear in both.

CASE VIII.—*Gastric symptoms for seven or eight years; attacks of severe gastralgia; prolonged periods of freedom: hemorrhage from stomach and bowels.*

M. I., aged 40, patient of Dr. F. W. Campbell. This case was remarkable for the long duration of the symptoms, the severe gastralgic attacks, and the remarkable periods of freedom from troublesome symptoms. He had on several occasions hemorrhage from the bowels without hæmatemesis, and this feature of the case led Dr. F. W. Campbell and Dr. R. P. Howard to suspect that the condition was one of duodenal, not gastric, ulcer.

Autopsy.—Moderate emaciation. In abdomen, stomach appears a little dilated; lower coils of small intestine dark-colored. Nothing special in thorax. Stomach somewhat dilated; walls of moderate thickness. Mucous membrane pale; at the cardiac end, thin. Pyloric orifice is narrowed, admitting the little finger to the second joint. When slit open, there is no special thickening; but the mucosa is puckered, and presents an elevated ridge. Duodenum: Part immediately outside the ring much narrower than adjacent regions, measuring only 3·7 cm. About 10 m. from the pylorus there is an oval ulcer 2·5 by 1·8 cm., extending in direction of axis of gut, and occupying chiefly the posterior section of the tube. It is deep, with rounded edges, which, toward the upper and back part, are undermined for about 6 m. In places the floor of the ulcer is quite 6 or 7 m. below the level of the mucosa, and presents a tolerably smoth, fibrous appearance. The head of the pancreas forms the base of the lower three-fourths, the upper part is protected only by the thin muscular walls of the first piece of the duodenum, the peritoneal surface of which, at the site of the ulcer, is puckered and cicatricial. Immediately in the centre of the floor is a small, dark, blood-stained elevation, consisting chiefly of fibrin. On injecting water through the hepatic artery, small clots are washed out at this point, and the water flows freely into the ulcer through an opening in the gastro-epiploica dextra, 2 m. across, and with smooth edges. The papilla of the bile duct is 6 cm. below the ulcer. Nothing else of note in intestines.

CASE IX.—*Severe gastralgic attacks for six months; slight dyspeptic symptoms; hemorrhage from stomach and bowels.*

J. G., aged 45, seen with Dr. Whiteside June 13th, 1885. Patient was a large, stout man, who had been strong and healthy. He had taken alcohol freely, and of late has had business worries. No history of syphilis. He had suffered at times with dyspepsia, but, as a rule, he had a good appetite and good digestion. In February he began to have pains in the abdomen. The first attack came on suddenly one night, and was so severe that he got no sleep. They have recurred on and off ever since, most frequently at night, lasting from one to three hours. He described the pain as starting in the epigastric region and passing to the back and round the sides. He would frequently sit on the edge of the bed for hours doubled with the pain. In the intervals of the paroxysms there was a dull, heavy sensation in epigastrium. There was never any vomiting with these attacks. Food, he insisted, had no special influence one way or the other in inducing or aggravating the pain. Sometimes there was a sense of oppression after a full meal. Pressure often gave relief during the paroxysm. Since February he has not been a week free from attacks, and has lost between 30 and 40 lbs. in weight.

Inspection showed a stout, well-nourished man. Face pale, tongue lightly furred; pulse 104, tension increased. The abdomen large and fat, and in the epigastric region there was a remarkable throbbing, most distinct about two inches and a half from the ensiform cartilage, but a large wave of pulsation passed over the whole abdomen from this point. The shock, indeed, of the pulsation was unusually forcible, and was perceptibly communicated to the bed. The heart impulse was not very marked. On palpation, there was a sense of deep resistance between navel and ensiform cartilage, but no distinct tumor could be felt, no thrill. The thick panniculus, however, made the examination very difficult. The throbbing was very violent with each systole, but the pulsation which could be felt was trifling in comparison with the visible pulsation. This I underlined in my notes. The spot where it was most distinct corresponded to a point a little more than two inches from the ensiform cartilage. There was no expansile movement; no dullness. There was no dilatation of stomach. On auscultation, a systolic murmur was heard at ensiform cartilage and for one and a half inches below it, also audible in 7th and 8th left costal cartilages. In these positions it was a distant but very distinct murmur. In the genu-pectoral position the throbbing was less marked, but no tumor could be felt. No murmur could be heard at the back, and there was not special tenderness over spines. The liver and spleen were normal. There was a soft systolic murmur at apex of heart, and the second aortic sound was very sharp and clear.

I only saw the patient on this occasion, and a positive diagnosis was not reached. Three possibilities were discussed—ulcer of stomach, aneurism of abdominal aorta, and deep-seated tumor lying upon the aorta. The cardialgic attacks, so pronounced, and of a character so similar to those which occur in ulcer, seemed to point to this condition, but the entire absence of vomiting and the tolerance of food seemed inconsistent with this view. The remarkable throbbing and the systolic murmur suggested aneurism, in which, also, there may be, as in Stokes' celebrated case, the most intense paroxysms of pain, but in the absence of a positive tumor, throbbing and a bruit do not suffice to establish the diagnosis of aneurism.

Dr. W. L. Morris has kindly furnished me with the notes of the case subsequent to my visit. On the evening of the 13th he had most excruciating pain, lasting two hours; no vomiting. On the 14th he vomited in the morning; no gastralgic attack. On the 15th he vomited two quarts of thin fluid, in which there was a blackish sediment. On the 16th, vomited a great deal. For the next week he had repeated attacks, bringing up dark material like altered blood, and passed dark stools. He gradually sank and died on the 24th.

Autopsy, twenty hours after death.—Skin blanched; much subcutaneous and omental fat. The heart was flabby and soft. The mitral curtains a little thickened at edges; aortic cusps also thickened about the corpora Arantii. The aorta presented advanced atheromatous changes, particularly in arch and its branches. The abdominal aorta was also roughened by numerous irregular projections. The lungs presented no special changes. The stomach was distended with gas, and contained about a pint of dark fluid. Mucosa towards pylorus thickened; no other changes. Duodenum, half an inch from the pyloric ring, presented a round ulcer the size of a half-dollar piece (3 cm.), the base formed partly by head of pancreas and partly by thickened omental tissue. A small orifice existed in the wall of the superior pancreatico-duodenal artery which ran along the floor of the ulcer. There was thickening about the head of the pancreas, and the subjacent tissues were matted together.

Pain is a very variable symptom in duodenal ulcer, and is absent in at least one-half of the cases. There may be for years agonizing gastralgic attacks recurring at irregular intervals, usually worse at night, and coming on from two to six hours after taking food. As in *Case VIII*, there may be prolonged periods of freedom from the attacks. The diagnosis of duodenal from gastric ulcer is rarely possible, as there are no distinctive features. The gastralgic attacks recurring at intervals for many years appear to be more common in duodenal disease, and was the symptom, I believe, which led a distinguished American clinician to make the diagnosis in his own case.

ASEPTIC MIDWIFERY.

AN ABSTRACT OF A PAPER READ BEFORE THE MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

By J. C. Cameron, M.D.
Professor of Obstetrics, McGill University.

Under the term *sepsis* are popularly included a number of morbid processes which differ clinically as well as pathologically, but in all cases, whether grave or mild, two things seem to be essential—an absorbing surface and noxious matter capable of absorption.

In puerperal cases the absorptive power is specially active, a convenient surface for the entrance of infective matter being presented by the denuded placental site and the numerous lacerations and abrasions which are usually present after labor.

The absorbable septic agents may be conveniently divided into three classes:

1. *Specific microbes*, which multiply rapidly and invade the whole body, even when absorbed in small quantities.

2. *Ptomaines* or ferments, active inanimate septic matters, frequently the product of microbes acting upon the tissues, giving rise to the condition called by some *sapræmia*.

3. *Pyogenic cocci*, which penetrate rapidly and in large numbers, and which may or may not produce metastases. They have the power of setting up suppuration in the tissues with which they come in contact. The most important of them is the *Streptococcus Pyogenes*, the cause of ordinary acute abscess. From cultivation experiments it seems highly probable that, under favorable circumstances, this coccus may rival the anthrax bacillus in virulence and ability to spread throughout the body.

The true relations existing between micro-organisms and septicæmia have not yet been definitely settled; some observers regard micro-organisms as the cause, while others consider them merely the result of the septic state. Ogston claims that septicæmia and pyæmia are but *secondary* phenomena dependent upon local centres of coccus growth, and argues that, as they are only symptoms, they should disappear as soon as the primary local cause is removed. However the question may be decided in the future, the evidence at present seems to show (1) that no single microbe has yet been discovered invariably present in puerperal septicæmia; (2) that septic cases can seldom be classed clinically as purely toxic or purely infective, but that usually several causative factors are present; (3) that clinically, infective matter which produces a local abscess in one case may cause moderate constitutional symptoms in a second, or such profound disturbance in a third as to terminate rapidly in death. In this respect, the causative elements resemble those of zymotic diseases like variola and scarlatina.

Whatever difference of opinion may exist *theoretically* as to the cause of puerperal septicæmia, *practically* it seems pretty well agreed that the infectious matter, whether animate or inanimate, comes directly or indirectly from without, and is absorbed through some lesion in the parturient canal. If, then, we can manage to exclude noxious matters from genital abrasions, or prevent their formation or absorption, septicæmia will not occur. The rational treatment of the puerperal period lies therefore in the direction of *asepsis* or *antisepsis*, the exclusion or the destruction of germs.

The *aseptic* or dry method aims to exclude germs, and is theoretically preferable; but, practically, it requires great care, and the lochia sometimes become offensive in spite of every precaution.

The *antiseptic* or moist method aims to destroy the germs by frequent antiseptic douches or to wash them and their products away, thus preventing the accumulation and absorption of foul matters. But constant douching is laborious, often irksome and unpleasant, and is, moreover, liable to certain risks, notably the absorption of the antiseptic or the production of pelvic inflammation.

In Germany many slight forms of constitutional disturbance are called septic, which often pass unnoticed or are summarily dismissed as ephemeral fever, milk fever, etc. For instance, subinvolution, when not the result of traumatism or old catarrhal inflammation, is considered a common indication of mild sepsis. Normally, after the expulsion of the placenta, firm uterine contraction is established and hemorrhage prevented, the lochia soon fade, and involution proceeds steadily. But the absorption of septic matter interferes with normal involution by impairing the contractile power of the uterine muscle; involution is retarded, the lochia fade more slowly, slight hemorrhages are apt to occur, the uterine tissue feels softer, and chronic pelvic troubles are more apt to result. The symptoms vary according to the intensity of the septic process, the uterine muscle being as sensitive to the presence of septic matter as the thermometer is to variations of temperature; so that the manifestations of the earlier and slighter degrees of sepsis are to be found in uterine muscle before pulse and temperature have been appreciably affected.

(An account was then given of the antiseptic and aseptic methods employed in the leading maternity hospitals of England, France and Germany.)

The method now in use in the University Maternity, and which, with some slight modifications, I adopt in private practice, is as follows:

1. Strict precautions are taken to scrub and disinfect the hands thoroughly before each vaginal examination.
2. Whenever possible, a preliminary vaginal douche (sublimate) is given at the beginning of the second stage of labor.
3. Great pains are taken to secure and maintain firm uterine contraction after the expulsion of the placenta; frictions to the fundus are kept up for an hour before the binder is applied.
4. After the birth of the child the vulva is kept covered with a pad of sublimated jute, and is carefully washed with a sublimate solution every time the pad is changed. Vaginal or uterine douches are not employed except in operative cases or where the hand has been introduced within the vagina or uterus after the expulsion of the placenta.
5. A few hours after delivery, the vulva and anterior portion of the vagina are thoroughly douched out with a strong sublimate solution, the parts carefully inspected, stitches applied if necessary, and about a drachm of boro-iodoform insufflated into the vulva and ostium vaginæ; a thick pad of sublimated jute is

applied, and whenever it is changed the external parts are washed with a sublimate solution. No further dressing or douching is usually required, the uterus generally involutes rapidly, and the lochia soon fade. If the lochia become offensive, an antiseptic vaginal douche is given, boro-iodoform again applied to the vulva, and the dry dressings continued. As the pathologist sterilises his culture-tube and then plugs it with cotton-wool to filter and sterilize any air which may thereafter enter, so the obstetrician, by filling the vulva with boro-iodoform and covering it with a thick pad of sublimated jute, strives to filter and sterilize any air which may enter the vagina and keep the parturient canal *aseptic* as far as possible. Practically, this plan works admirably ; the patients are more comfortable, elevations of temperature rare, involution more rapid and complete, and convalescence more satisfactory.

When temperature and pulse rise rapidly from the third to sixth day, and other causes can be excluded, sepsis may be generally inferred. In such cases the septic condition is most frequently due to the presence of decomposing debris in the uterine cavity ; loose shreds and clots are not usually as dangerous as bits of placenta or membrane which remain adherent to the uterine wall, and are therefore in more intimate relations with the maternal circulation. A simple uterine douche is generally sufficient to sweep away loose debris, but is unable to dislodge those portions which adhere to the uterine wall. When a uterine douche fails to bring down the temperature in a few hours, it is good practice to follow the German method, viz., pass a blunt curette into the uterine cavity and scrape away the adherent decomposing material. Thus in a few minutes septic matters are removed from the uterus which would otherwise take a week or more to separate, the patient being meanwhile subjected to the danger of septic absorption. I first saw this method last July in Carl Braun's wards in Vienna ; it was then quite a novelty, having been in use only a few weeks, but has now become a recognized treatment. The case was one of placenta prævia much exhausted from loss of blood. Version was performed successfully, but the placenta being extensively adherent had to be removed. In thirty-six hours the temperature rose to 103° ; the patient was carried at once into the operating room, the anterior lip seized with a vulsellum, the uterus well drawn down, the blunt curette passed, and the uterine cavity thoroughly scraped out. A piece of placenta the size of a walnut and a quantity of broken-down debris came away ; the uterus was then douched out with a sublimate solution and the vagina packed with an iodoform tampon. The next day the temperature was normal, and the patient made an uninterrupted recovery. Since my return I have had occasion to use the curette in several cases. In all of them I scraped away shreds of membranes or decomposing debris firmly adherent to the uterine wall, which repeated douches had failed to dislodge. In two of the cases the curetted matters were examined under the microscope and streptococci found in abundance. Without the curette, the chances of these patients would have been very slight.

The most important points in the antiseptic treatment may be briefly summarized as follows :

1. Great care in the disinfection of hands and clothing.

2. A preliminary vaginal douche (sublimate) when possible.

3. Careful management of the third stage of labor, and securing firm contraction of the uterus.

4. The dry method of dressing.

5. A vaginal douche if there is rise of temperature or offensive discharge ; if that fails, a uterine douche ; if that fails, immediate curetting of the uterine cavity.

6. If, later on, there is evidence of peritonitis and the presence of pus in the peritoneal cavity, abdominal section with thorough cleansing and draining offer the best chance of recovery.

WOUND OF THE INTERNAL JUGULAR VEIN, FOLLOWED BY RECOVERY.

By James Bell, M.D.,
Surgeon to the Montreal General Hospital.

On the 27th of November last Fred V., a carpenter, aged 27, was working on a scaffold placed on ladders, when one of the ladders gave way and he fell to the floor, a distance of about four feet, with a sharp inch-and-a-half carpenter's chisel in his right hand. In falling the chisel entered the right side of his neck, making a vertical wound a little more than an inch long, with its upper extremity just below and behind the angle of the jaw. He immediately withdrew the chisel, which was followed by a tremendous gush of blood. He grasped the side of his neck with his hand, and got up and walked down a flight of a dozen steps of stairs to where his comrade was working. The change of position and the pressure of his hand stopped the bleeding for the moment, but the neck swelled rapidly and the bleeding recommenced. When he reached his comrade he felt faint and giddy, and when he attempted to speak he found that "his voice was gone" and that he could only speak in a whisper. His comrade laid him down and tied a handkerchief tightly round his neck, but as this failed to stop the bleeding he applied pressure over the handkerchief with his hand. The Montreal General Hospital Ambulance was telephoned for and arrived in a few minutes, accompanied by Dr. Kirkpatrick of the hospital, who found that the patient had lost and was still losing a large quantity of blood. He took charge of the wound and controlled the hemorrhage by compression until he reached the hospital, when he was assisted by the medical superintendent and the other resident medical officers. I was immediately telephoned for, and on reaching the hospital I found him still losing a great deal of blood in spite of the well-directed efforts of the resident staff to control it by digital compression applied over the wound. The patient was weak and pale, and showed unmistakeably the evidences of having lost a large quantity of blood. Having made the necessary preparations, I directed compression to be applied over the common carotid artery (which could be felt in the lower part of the neck, although the tissues higher up were much infiltrated with blood), and the compressing hand having been removed from the wound I hastily thrust my right forefinger into it. The performance of this act, although easily and speedily executed, was accompanied by an alarming gush of blood. I directed the wound to be compressed around and against my finger, which arrested the hemorrhage. The blood was apparently venous in character, although up to this time the lesion had been thought to be a wound of the carotid artery. I found that the wound extended upwards and backwards behind the sterno-mastoid muscle and along the base of the skull. I could feel the bodies of the upper cervical vertebrae, the styloid process of the temporal bone, and other prominent points about the base of the skull, but I could not put my finger upon the bleeding point so as to arrest the hemorrhage. As his condition was a very desperate one, and the permanent arrest of the hemorrhage seemed to be almost an impossibility, I sent for Dr. Fenwick in order to have his advice and assistance before removing my finger from the wound. I consequently retained my finger in the wound, and compression was applied against it as already described, until Dr. Fenwick arrived. Dr. McClure then took my place and introduced his finger as I withdrew mine, the change being again accompanied by a tremendous gush of dark venous blood. We then decided to tie the common carotid artery, thinking that although the gushes of blood were very dark and apparently venous in character, a large vein could hardly be wounded in this situation without some of the great arterial trunks being wounded at the same time, and that this operation would be a wise precaution as a prelude to further treatment. The patient was then etherized and the artery was tied below the omohyoid muscle, the infiltration of the cellular tissue with blood greatly obscuring the ordinary guides to the vessel. The ligature of the carotid had no effect in reducing the hemorrhage. We then decided that, judging from the rate at which the blood flowed whenever the pressure was relaxed, any attempt to enlarge the wound and catch the bleeding vessel would be fatal in a few seconds, and that our only recourse was to compression within the wound. Accordingly two large-sized fine Turkish sponges which had been prepared but had never been used were taken from corrosive sublimate solution and their interstices filled with iodoform. Taking one of them I rolled it up tightly in a somewhat conical form, and introducing it through the skin wound, pushed it firmly back to the base of the skull along the track of the wound; the second sponge was then introduced on top of this and a Lister dressing firmly applied to the neck. This completely arrested the hemorrhage—a little blood-stained serum only finding its way through the dressing. The patient was now very weak and pale, and almost pulseless. He could not swallow except with the greatest difficulty, could not speak above a whisper, and his right pupil was very much contracted. He soon rallied, however, and in a day or two could swallow very well, although his voice has never been restored. A moderate degree of ptosis of the right lid was observed the following day. It probably existed from the first, but was overlooked in the presence of so much graver symptoms. The dressings were changed on the fourth day and again on the ninth day, when the outer sponge was withdrawn without difficulty, and without being followed by any sign of hemorrhage. On the sixteenth day after injury the dressings were again removed. The external wound was lengthened and enlarged by an incision backwards from its posterior border and the larger part of the remaining sponge, which was firmly held in the wound, was cut away with curved scissors. The wound was then irrigated and stuffed with iodoform gauze, and a gauze dressing applied. It was again dressed on the twenty-first day, and again on the twenty-eighth day after the accident. At this latter dressing the sponge was found to have become detached and to have worked its way out nearly to the surface of the wound. It was easily removed. The subsequent progress of the case was uninterrupted, and the wound is now (seven weeks after the accident) almost completely healed. There is still a little sinus leading down to the ligature which was applied to the carotid artery; the ptosis remains unchanged, as well as the contraction of the right pupil. The voice has slightly improved, but is still whispering and low pitched, and he carries his head towards the injured side. The latter is probably due to the contraction and stiffness about the wounds.

Remarks.—There can be no doubt, I think, that the source of the hemorrhage was a wound of the internal jugular vein close to the base of the skull. The paralytic symptoms also show clearly that the sympathetic and superior laryngeal nerves were severed. The partial ptosis may also be explained by the sympathetic nerve lesion. It seems scarcely credible that, under the circumstances, this patient did not bleed to death on the spot. This may be explained, I think, by the fact that the wound was a valvular one, and when he altered the position of his head so as to stand up and look straight before him, the sterno-mastoid muscle was interposed between the bleeding vessel and the wound in the skin so as to completely close the latter, and thus the flow was for a time arrested. The behavior of the sponges is very instructive, and shows that venous bleeding from any source may be controlled permanently by well applied pressure. Both the original wound and that made for the ligation of the artery remained aseptic throughout.

QUARTERLY RETROSPECT OF SURGERY.

By Francis J. Shepherd, M.D., C.M., M.R.C.S., Eng.
Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on Operative Surgery, McGill University.

Trephining in cases of Bleeding from the Middle Meningeal Artery without Fracture of the Skull.—Prof. Krönlein, in a lecture published in the *Deutsche Zeitschrift für Chirurgie*, Band XXII, Hft. 3 and 4, points out that trephining in cases of rupture of the middle meningeal artery without fracture of the skull is one of the most satisfactory operations of surgery with regard to certainty and promptness in removing a very serious danger to life, and when performed under antiseptic conditions, to freedom of the operation from risk. During the last three years Prof. Krönlein has trephined in four cases where he had diagnosed rupture of the middle meningeal artery. In every case the diagnosis was confirmed, and there was always found a considerable supra-dural extravasation of blood in the region of the middle meningeal artery on the side of the operation. In two of the cases the hæmatoma was found and removed at the time of the operation; in the other two cases the hæmatoma was not found till after death. The first two mentioned cases recovered. Prof. Krönlein says there are many forms of hæmatoma from rupture of the middle cerebral artery, but most of these may be referred to one of two types—either that of a *diffused hæmatoma*, in which the extravasation of blood is very abundant and spread over the whole concavity of the affected side of the skull, or that of *circumscribed hæmatoma*, which may, however, be of considerable extent, but in which some portion of the dura mater on the affected side of the head remains attached to the bone. This latter variety of hæmatoma is sharply defined at its periphery, is oval or round in form, and frequently is most thick at its central part. The most frequent situation of circumscribed hæmatoma is the middle segment of the skull. . . . . . The high vulnerability of the temporal region, together with its free supply of large arterial vessels, explain sufficiently the fact that this is most frequently the locality of intra-cranial hemorrhages. . . . .

In discussing the proper seat of the operation in trephining for hemorrhage from the middle meningeal artery, Krönlein points out that, though the application of the trephine at the seat of election for ligature of this artery in its continuity, viz., over the anterior inferior angle of the parietal bone, will expose any diffused hæmatoma and the temporo-parietal and fronto-temporal varieties of circumscribed hæmatoma, the posterior or parieto-occipital variety is not accessible at this spot. The rule, therefore, is laid down that when dangerous hæmatoma of the middle meningeal artery has been diagnosed, and no trustworthy indications of the precise locality of the extravasation are presented, either on the scalp or the cranial vault, trephining should be performed at the above-mentioned seat of election. Should this operation, however, fail to detect any collection of blood, the surgeon, if still holding by his diagnosis, should again trephine, and with the expectation of exposing a parieto-occipito hæmatoma, penetrate the skull immediately below the parietal eminence. The following directions are given for determining the proper places on the surface of the skull for the application of the trephine: A line is drawn from the upper margin of the orbit backwards along the side of the head and parallel to the horizontal line of the head (a line drawn from the auditory meatus to the lower margin of the orbit). In this line should lie both orifices made by the trephine, the anterior being between three and four cm. (about 1¾ inches) behind the external angular process of the parietal bone, and the posterior at the crossing of this line by a vertical line drawn directly upwards immediately behind the mastoid process. A second trephining, which, if made under proper antiseptic conditions, is not likely to subject the patient to any additional danger, is said to be indicated for the purposes of better removal of coagula and also of drainage in cases of diffuse hæmatoma reaching from the frontal bone to the occipital protuberances.—(*London Med. Record*, Oct. '86.)

Ever since Sir Charles Bell demonstrated that a blow on the side of the head, not producing a fracture, could separate the dura mater from the skull at the point of injury, and that this separation was followed by hemorrhage due to the tearing of branches of the middle meningeal artery or the main artery itself, surgeons have endeavored to save the life of the patient by trephining the skull for the purpose of arresting the hemorrhage and removing the effused blood. The cases operated on, as a rule, ended fatally until within the last few years, when antiseptic precautions were introduced and the actual risk of the operation reduced to a minimum. Cases of meningeal hemorrhage are by no means uncommon, and scarcely a year passes without the daily press recording many deaths occurring after injury to the head, and due, unmistakably, to meningeal hemorrhage. As a rule, these cases expire before they come under the care of a competent surgeon, and the patient is allowed to die without any attempt being made to save his life by operative measures.

Only the other day a case occurred near here, where a young man fell a short distance and struck his head; he was senseless for a few minutes, and then recovered sufficiently to walk some distance to his home. After going to bed he gradually became unconscious, and died comatose next day. I read in the daily papers a short time ago of another case. A young man was going to his room in his hotel, and whilst passing along the corridor was struck on the head with a cane by a person who was in a semi-drunken state. He felt a slight pain at the time, but went to bed, and next morning was found dead. Both these proved to be cases of rupture of the middle meningeal artery without fracture of the skull. They might have been saved by the operation of trephining performed in proper time.

Dr. F. G. Dennis (*Medical News*, Nov. 13, 1886) says:—"The presence of symptoms of cerebral irritation followed by unilateral paralysis, with a slow tense pulse, the Cheyne-Stokes respiration, accompanied by a sudden rise of temperature due to disturbance of the heat centre, form a group of symptoms which, if they were preceded by a short interval after the injury in which no serious manifestations of brain lesion were present, make it extremely probable that an intra-cranial meningeal hemorrhage has occurred."

In such cases the surgeon who did not trephine would be guilty of gross negligence of duty, and although many of the cases could not be saved, still a sufficient number would recover to justify operative measures being undertaken in all cases where meningeal hemorrhage is suspected.

Relation of Modern Surgery to Medicine.—During the late meeting of the German Scientific Medical Association, held at Berlin, Prof. von Bergmann delivered an address on the above subject (*Brit. Med. Journal*, January 15, 1887). Prof. Bergmann dwelt on the extraordinary progress made by surgery during the last few years, and said that it now leads medicine, and that the relationship which exists between medicine and surgery should be examined afresh. "Such disturbances and ruptures now threaten the peace of the great medical family that it becomes necessary to examine and settle new claims and ancient titles of possession." He drew attention to the fact that the scientific development of ophthalmology "had brought the treatment of eye diseases to a degree of perfection far beyond the reach of any other branch of surgery. All national differences in ophthalmology have ceased and their place has been taken by one method and one school." General surgery now claims a similar position in virtue mainly of its newly acquired ability to invade, with comparative impunity, regions of the body hitherto looked upon as sacred from the knife. Though the enormous strides surgery has made during the last decade are not the effect of a blind empiricism, but of a clearer insight into the processes of nature; practice in this field has always been in advance of theory. Alphonse Paré tied arteries one hundred years before the discovery of the circulation of the blood. "The consideration that impelled Lister to adopt the antiseptic treatment had only the value of an hypothesis, which surgeons examined solely in regard to its practical consequences, until other and non-surgical experiments and results established this hypothesis on solid foundations."

The two chief principles on which the surgery of the present day is based are: (1) That all wounds necessarily heal of themselves by virtue of a natural tendency in that direction; and (2) that this tendency is only altered by external influences, to which alone all inflammation and suppuration are due. Only those wounds are fatal which prevent a vital organ from continuing its functions, with less serious injury the surgeon can now deal with success. There is no special vulnerability of tissue of any organ; age and even disease make no difference. "The flesh of a man 80 years old heals as well as that of a boy of 8, and operations on feverish consumptive patients are now as successful as those performed on patients in perfect health."

Surgery now aims at extending its ancient limits; and misled by the success of surgery, medicine is tempted to have recourse more and more to operative measures. There is now the surgery of the brain, of the lungs, of the kidneys, of the stomach, and gall-bladder. There is more or less rivalry between medicine and surgery in the cure of disease, but further progress in surgery can only take place through an increased knowledge of internal medicine. Surgeons must now avail themselves more of the accurate means of investigation which we owe to the physicians—auscultation and percussion, thermometry, chemical, microscopical, and electrical investigation. As long as internal medicine remains the guardian of scientific methods and scientific principles, so long will it remain the parent tree of which surgery is only a branch.

The few infectious diseases against which surgery is now armed are, however, but a small fraction of the plagues and pestilences which afflict mankind; numerous as were the victims of powder and shot in the struggle between France and Germany, that was the first war recorded in history in which they were not exceeded by the multitudes who fell a sacrifice to disease. It is to the better knowledge of the causes of disease that the success of both medicine and surgery is due. Medicine had isolated the group of infectious diseases, and had shown that the infectious material was reproduced in the body long before surgeons recognized all disturbance of a wound to be due to inoculation from without, and set themselves to prevent that occurrence. Surgical measures are now directed against the entrance of microphytes into the body at the surface, but numerous workers are engaged in seeking for means to destroy them after admission within the body. The study of these elementary organisms may throw more light on the vital elements of complicated organisms than the biology of the latter themselves. "At least we are no longer inclined to assume that the lowest microbes behave in a manner essentially different from the higher plants and animals. On the contrary, the physiological chemist now seeks in the fundamental structure of all living matter a single original chemical organization from which all its properties may be deduced in common."

It follows from what has been said that surgery owes all its recent development to clinical medicine, and just as the antiseptic treatment is the product of careful observation in etiology, so the energetic procedures of internal surgery will have successful results only when firmly established by the methods of clinical medicine, otherwise surgery will sink in the hands of expert specialists to a mere display of manual dexterity.

Two instances may be given of the importance of testing the widest possible view of the surgical art. The course and limitations of tuberculosis cannot be so well grasped from the study of internal organs as from those surgical diseases which we know to be due to the presence of some morbific material. These comprise various affections of the skin, the lymphatic glands, the bones and joints, and observation of them has thrown new light upon the most important phenomena of tuberculosis. Again, the revelations made by surgery as to cancer are not less important; they have shown that this scourge is at first not a general disease of the whole system, that it has nothing to do with poisoning of the blood or juices, but is always purely local in its commencement. Thus, when viewed in its proper aspect, surgery, far from stealing from medicine, enlarges the boundaries thereof, and Prof. Bergmann's eloquent and suggestive address will be of service in defining the relationship between the two, and insisting upon the pursuit of clinical surgery as an integral part of scientific medicine.

Treatment of Cysts of the Thyroid.—At a meeting of the Clinical Society of London, held on January 14th, 1887, Mr. Mayo Robson of Leeds read a paper on the above subject. (*Lancet*, Jan. 22nd, '87.) He advocated antiseptic incision and stitching the edge of the cyst to the skin, scraping out the interior of the cyst and draining for a short time under an antiseptic dressing, then packing with zinc lotion and lint. He read notes of two cases thus treated. The first that of a young woman aged 22, who had a cyst the size of a small orange over the trachea which occasionally produced dyspnœa; the second in a woman aged 24, in whom the right lobe of the thyroid was forming one large cyst. In both, the above treatment was perfectly successful, and produced no constitutional or local disturbance. When seen some time afterwards there was very little trace of a scar and no tumor in either case. He considered the usual operations of injections, setons, etc., dangerous and unsatisfactory, and thought the advantages of this method were its simplicity, safety and certainty.

In the discussion which followed, Mr. Christopher Heath remarked that Mr. Robson had said nothing about hemorrhage, which he knew from personal experience could be pretty severe from the interior of the sac. He did not know the reason for this, but the injection of perchloride of iron and plugging with strips of lint soaked in the perchloride succeeded very well in arresting hemorrhage.

Dr. S Mackenzie had examined many microscopical preparations of these cysts, and the thin-walled vessels were exceedingly numerous. Iron was better than iodine to stop hemorrhage.

Mr. Clutton never thought it necessary to suture the cyst to the skin. In some cases of plugging the opened cyst, high fever developed ; the use of iodoform gauze obviated this tendency. The suture of the skin had an objection, in that it might cause the sinus to remain open, as in one case which continued three years. He would prefer complete excision to scraping its walls.

Mr. Bryant supposed that Mr. Robson did not claim that free incision was a new treatment, but that stitching the capsule of a cyst to the skin was. If this were not adequately done septic matter might escape into the subcutaneous tissues. The fear of hemorrhage would be an argument in favor of laying the cyst open and making a sinus. In a case of puncture of a cyst, free incision and plugging were required to stop hemorrhages. He considered scraping out the interior of the cyst bold practice.

In reply, Mr. Robson stated that he practised sufficient scraping to separate all colloid material, but not to extend deeply into the wall of the cyst.

Operative Treatment of Goître.—Dr. C. Garré of Bâle, assuming that total extirpation of the thyroid gland cannot at the present day be regarded as a justifiable operation, directs attention to a modified operation that has been performed for some years past by Professor Socin, and with very satisfactory results in about fifty cases. This operation consists in intraglandular "shelling out" of the degenerated portions of gland, and is similar in its mode of performance to procedures previously adopted by Juillard, Rottman and others. In a very large proportion of cases of goître submitted to operation, the disease of the gland occurs in the form of circumscribed masses, each of which is separated from the healthy and normally acting portion of the thyroid structure by a capsule of more or less thickness.

If the surgeon in operating is able to clearly distinguish this natural limit, the procedure of shelling out is practicable, but there is a difficulty in making out this capsule with precision. If the diseased mass be situated near the surface of the thyroid the covering layer of glandular structure presents the appearance of very thin membrane. If this be left undetermined, and the dissection be commenced and carried beyond it, more and more of the proper gland structure is removed, until at last the operation becomes one of typical unilateral or even total removal of the gland. If, on the other hand, the diseased mass is deeply embedded in the gland, it was necessary to work through a thick layer of very vascular thyroid structure before the boundary of the disease is clearly indicated by the presence of a bluish transparent capsule traversed by but few vessels, the bleeding, though sometimes profuse, is simply venous. It is held to be an important point to keep close to the capsule, and not to begin the "shelling out" of the disease before this has been found. Two or more goitrous masses may be thus removed from a thyroid gland by one or more incisions without wounding any large vessel. The bleeding, as a rule, is unimportant, and can be corrected by compressions. The cavity left after removal of the disease is then drained. In not one of the fifty cases operated on by Professor Socin were any symptoms of tetanus observed. There need not be any fear of subsequent cachexia strumipriva, as only the diseased and degenerated portion of the gland is removed.—(*Centralblatt für Chirurgie*, No. 45, 1886, and *Lond. Med. Record*, Dec. 1886.)

Relation of Cachexia Strumipriva to Removal of the Thyroid.—A discussion on this subject took place at the Berlin Scientific Congress, in which it was sought to ascertain whether the myxœdematous condition always supervened upon complete removal of the gland. It seems most probable that those cases in which this condition was not observed are to be ascribed to the fact that either the thyroid gland was not completely removed or else some accessory gland in the neighborhood so far supplied its place that no bad consequences supervened.—(*Central. f. Chirurgie*, Oct. 30th, 1886, and *Practitioner* for December, 1886.)

Ligature of the Superior Thyroid Arteries for Goître.—At a meeting of the Imperio-Royal Society of Medicine in Vienna, held on the 5th November, 1886, Prof. Weinlechner presented a woman, aged 33, who had suffered from goître from infancy. It had latterly interfered much with respiration, so on the 8th of October last she entered hospital in a very serious condition, face was livid and dyspnœa was so great that extirpation was indicated. The left side of the tumor was as large as one's fist, and the right a little smaller; the upper portions of each half of the tumor were supplied by superior thyroid arteries as large as normal carotids. The right carotid was enormously dilated. The voice had been harsh since infancy. Prof. Weinlechner, not wishing to extirpate the tumor on account of the great amount of oppression, followed the example of Woelfler and ligatured the two superior thyroid arteries. Immediately the murmur ceased in the arterial trunks and carotid, the lividity of the face disappeared, the dyspnœa diminished, and the patient was considerably better. But the same day she had severe spasms of the upper and lower extremities and convulsive movements of the hands. The head and face did not participate in these spasms. The brain at first was not very clear, but soon became normal. These spasms were not repeated, and the patient continued to improve. The circumference of the tumor diminished 3½ inches in 24 days. In Woelfler's case the circumference of the tumor after ligature of the superior and inferior thyroid of one side diminished in seven months 3¼ inches. The success in this case is very satisfactory, and if the patient had not insisted on extirpation Prof. Weinlechner would not have done it. If the right lobe hereafter enlarges, it is intended to ligature the inferior thyroids as well.—(*La Semaine Médicale*, Nov. 10, 1886.

Treatment of Syphilis.—Prof. Neumann of Vienna (*Wiener Med. Blatt.*, Nos. 33-36, '86), who has had an immense experience in treating syphilis, says that the preventive treatment or treatment of the primary sore and enlarged glands by constitutional means is without result, and the only effect it had is to postpone the secondary rash. The local affection should, of course, be treated as the phymosis, gangrene, etc.

Of all the methods of treatment, that by mercury is the best. Prof. Neumann does hold with those who treat constitutional syphilis expectantly, because, according to his experience, (1) its duration is inordinately long, (2) the individual is always a focus of infection for those about him, and (3) more severe forms of syphilis appear under the expectant than any other method of treatment. The author sounds a note which cannot be too often sounded when he says that after apparently complete recovery from the affection there are still stored up in the body diseased conditions which can only be got rid off by an anti-syphilitic treatment.

The extirpation of the primary sore and enlarged glands is of no use in the author's opinion. In one case where he removed the primary disease twenty days after infection, the general disease appeared seven months after.—(*Central. f. Chirurgie*, No. 3, 1387.)

Cocaïne.—This drug, which has of late been so extensively used in minor operations, has caused in certain cases, when administered in large doses, serious symptoms, and which on one or two occasions the cases have terminated fatally. Not long ago, in St. Petersburg, a celebrated surgeon committed suicide in consequence of one of his cases having died from the effects of cocaïne. When applied about the rectum, a much larger dose appears to be required than when used elsewhere. Twenty to thirty grains injected hypodermically have proved fatal, and much smaller doses have produced alarming symptoms.

Dr. W. E. R. Wood (*Australasian Med. Gazette*, Aug. '86) gives the following instance of the effects of an overdose of cocaïne used hypodermically. Four minims of a 20 per cent. solution of cocaïne were injected into the cheek of a man for the relief of toothache. At the time of making the injection, Dr. Wood believed he was using a 10 per cent. solution which had been used on the patient with good effect previously. Within five minutes patient became restless and inclined to vomit. He then began to feel a sensation of pins and needles in the left hand, and which rapidly extended to the right side. This was speedily followed by contraction and rigidity of the fingers, arms and legs, and a tendency to opisthotonos. Pulse rapid and feeble, and muscles of mouth and cheeks strongly contracted. His respirations were short and convulsive, his feet and hands very soon became cold, and profuse perspiration set in. After the use of heat to surface and stimulants internally, his pulse began to improve and his color return, but it was not till five hours had elapsed before all symptoms had subsided.—(*Practitioner*, Nov. 1886.)

Treatment of Varicose Veins.—In an editorial on the above subject in the *Philadelphia Med. News* for January 15th, 1887, the writer, after speaking of excision of varicose veins, and saying that it is a simple, safe method, and one that is almost sure to effect a cure, speaks of the plan of injecting into varicose veins various coagulating substances, and says that this plan still holds its ground and may be adopted in cases in which either the patient or the surgeon does not wish to face a cutting operation.

Surgeon-Major Stevenson, in the *Lancet* for Oct. 23rd, 1886, reported eight cases treated by the injection of pure carbolic acid with very good results. The circulation is controlled by an Esmarch's bandage applied round the thigh (the patient standing). The bandage is applied at first just tight enough to occlude the veins, and then firmly enough to cut off all the circulation. One minim of pure carbolic acid is injected at a number of points about an inch and a half apart, and cotton and collodion are applied over each puncture. The Esmarch bandage should not be removed until fifteen minutes after the completion of the last injection, and then the circulation is permitted to return only very gradually. For at least a week after the operation the patient should not assume the erect position or put his foot to the ground at all. This, of course, is to avoid the danger of an embolus being swept into the general circulation. Good results have been obtained by this method of treatment, although abscesses form at the seat of injection in about 10 per cent. of cases. The abscesses are small and painless. Weber reports in the *Medical Record* for Dec. 12, 1885, a successful case, where he injected a varicose saphenous vein with four drops of pure carbolic acid at four different points. while the vein was compressed above and below the points injected till a coagulum formed. This method, which was introduced by Watson Cheyne, appears to be safe as well as successful. The injection of carbolic acid into piles was practised for some years as a secret method, and when tried by the general profession the results were not as good as the method at first promised.

New Radical Operation for Hemorrhoids.—At a recent meeting of the New York Surgical Society (*Medical News*, Feb. 12, 1887) Dr. Lange stated that in mild cases he had obtained good results by injecting equal parts of glycerine and pure carbolic acid. In severe cases, complicated with prolapse of the mucous membrane, he had adopted a method of operation that was to be commended not only on account of its facility and completeness of the cure, but because of the fact that it is not followed by suppuration and necrosis of the tissues. It consists in excising the entire affected portion of mucous membrane and in suturing the edge of the remaining part to the integument. The essential advantages are the perfectly aseptic character of the process and the small loss of blood. An incision is carried around the anal orifice at the point of junction of the skin and mucous membrane, the parts being put on the stretch. The incision is carried down till it reaches the sphincter. The mucous membrane is then separated from the sphincter as far as necessary. In this way the entire degenerated portion is isolated, and so far as the arterial blood supply is concerned, remains connected with healthy tissue only by the vessels which supply it. A number of buried sutures of catgut are now inserted close to one another between the base of the external flap and that of the separated mucous membrane; these do not include any of the fibres of the sphincter, neither do they penetrate the rectum. If the stitches enter the sphincter, the patient suffers from severe tenesmus. The sutures may be continuous or interrupted, and secure nearly all the vessels. The mucous membrane is excised in parts at a point from a half to one centimeter above this line and the cut edges approximated by silkworm gut. After the third day the patient is allowed to have a passage of his bowels daily, and is kept on liquid diet for a week. He will be able to attend to his business at the end of the third week.

Reunion of Cut-off Toes and Fingers.—Dr. N. Ilinsky furnishes details (*Vratch*, No. 29, 1886, p. 538) of two cases of the kind. A boy aged ten hacked off the second phalanx of his left great toe, the part remaining connected only by means of a thin bridge of plantar skin. The patient being seen three hours later, the wound was disinfected and sewed with three sutures and an antiseptic dressing applied; complete union with restoration of sensibility and fairly free movement took place in thirteen days. Another patient, a tanner, aged 45, cut off the nail-phalanx of his left forefinger, the part being connected only by means of a very dirty and rough strip of palmar epidermis. The patient powdered his wound with soot and came to Dr. Ilinsky about five hours after the accident. The injury was treated as in the former case. On the third day after suturing, the man managed to hurt his injured forefinger, and even to dislocate the hewn-off part. It was again restored to place, and two weeks later was thoroughly united.—(*London Med. Record*, p. 529, December, 1886.)

Cerebral Surgery.—Prof. Greenfield, in a patient recently under his care in the Edinburgh Royal Infirmary who presented somewhat obscure cerebral symptoms, made the diagnosis of abscess in the anterior part of the left temporo-sphenoidal lobe. At his request, Mr. Francis M. Caird trephined and evacuated two ounces of fœtid pus from the brain. The wound was completely healed in 18 days, and the man regained his health.—(*Brit. Med. Jour.*, Feb. 5th, 1887.)

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL

SELECTED MEDICAL CASES IN DR. MACDONNELL'S WARDS.

CASE. I.

Rapid emaciation with persistent vomiting; physical signs of phthisis; pneumothorax. After death a hernia of the diaphragm is found; the stomach lodged in the thorax; tubercular deposit in the lungs; rupture of a small cavity into the pleura.

H. K.. aged 38, a machinist, was admitted into No. 11 ward of the Montreal General Hospital on the 3rd June, 1885, complaining of pain over the stomach, which was worse after meals, vomiting, loss of flesh, and general weakness. The members of his family had all been healthy, and there were no deaths amongst them from hereditary disease. The patient has always been in very good health, and fairly temperate in his habits. Some ten years ago he received a stab in his left side, from which he was laid up in hospital abroad for some months. There is a large scar two inches long and half an inch broad on the 7th interspace in axillary line. The original wound penetrated the intercostal muscles, the resulting scar projecting during inspiration. The present illness began eight months ago with pain in the epigastrium and upper part of abdomen, which was at first dull, but afterwards cramp-like and very severe, aggravated by the taking of food, and followed shortly by vomiting, which usually afforded relief. Since the illness began, has been unable to take any solid food. No dysphagia. Has become rapidly emaciated, his weight having become reduced from 170 to 100 lbs. There has never been any hæmatemesis, with the possible exception of one occasion in December last, when he vomitted a dark clotted mass, supposed at the time to be blood. Occasionally since then the vomited matters have been streaked with blood. The bowels have been very constipated. Has had a constant cough for the last six months.

State on admission.—The patient is anæmic and extremely emaciated, but there is no distinct appearance of any special cachexia. The tongue is red, glazed and dry; the appetite is poor; the bowels constipated. Great pain in the epigastric region is felt after the taking of food, and is relieved by vomiting, but since his admission this latter symptom has not been observed. There is no difficulty in swallowing. The abdomen is scaphoid, moderate tenderness over the epigastric region close to the ribs. No tumor can be detected. There is a persistent hacking cough, with muco-purulent expectoration; no hæmoptysis. Suffers from night sweats. Temperature normal. Urine high-colored, specific gravity 1025; no albumen, no sugar; heavy deposit of phosphates and lithates. Beyond the presence of a few dry râles at both bases, examination of the heart and lungs yields a negative result.

Treatment.—Milk diet, with a mixture of bismuth and dilute hydrocyanic acid.

June 8th.—Vomiting occurred several times in the last few days. It was observed that at the apex of the right lung, above the second rib, there is a comparatively high-pitched percussion note. A few dry râles are occasionally heard in this region.

June 13*th.*—Temperature 101°. No vomiting or pain after eating. Patient is rapidly losing flesh.

June 16*th.*—Elevated temperature still continues. Complains of pain in the left breast. On examination, a loud friction murmur is heard over the lower third of the right lung in front. Ordered poultices to be applied and 15 minims of liq. opii sedativus to be given.

June 24*th.*—Temperature 103° at night; pulse 110; respirations 40. Great pain on inspiration over the hepatic area.

June 26*th.*—Slight improvement. The pain is diminished, the friction sound less loud, and not heard over so large an area. Temperature 101° at night; pulse 100; respirations 32.

July 3*rd.*—Weight 93 lbs. A friction sound is heard on right side, in front, as high as the 2nd rib.

July 11*th.*—Orthopnœa present, with stitch-like pain in the right side, and there is a very troublesome cough, with copious muco-purulent expectoration. On the right chest there is marked bulging of the intercostal spaces, with absence of movement. On percussion, the note is throughout highly tympanitic, extending over the whole of the right side of the thorax. When in the sitting posture the note is dull up to the level of the fourth interspace in front, and behind as high as the angle of the scapula. The breathing is loudly amphoric, with a few moist räles heard throughout the lung. Bell note and Hippocratic succussion well marked. Complains of pain over the epigastric and hypogastric regions. In the afternoon, the dyspnœa rapidly increasing, the patient died.

Post-mortem examination.—Body much emaciated. On left side of the thorax, in seventh interspace, directly below the axilla, there is a large scar about three inches long by half an inch broad, with its long axis corresponding to the direction of the intercostal space. The finger, or even two fingers, can be pushed into the thorax for a distance of half an inch, the walls of the chest being very thin at this spot. *Heart:* Normal size and structure. The pericardium contained several ounces of straw-colored serum. *Right pleura:* The whole surface of the pleura was covered with the whitish-soft fibrinous deposit. The cavity of the pleura contained nearly two pints of diffluent fluid of a sero-purulent character. Opposite the second costal cartilage, on the right side, there is an opening into the lung as large as the end of one's little finger. This opening communicates with a small lung cavity the size of a filbert. *Left pleura:* The left pleura was found in a healthy condition. *Right lung:* Deposits of tubercle dotted throughout. A cavity about half an inch deep and one and a half inches long existed near the surface of the lung, opposite the third and fourth ribs in front, which had opened into the pleura. *Left lung:* Tubercle deposited throughout, but no cavities. *Diaphragm:* Between the pericardium and the left pleura there was found a large structure separating the two, which was tympanitic on percussion. This proved to be a large portion of the stomach distended by gas, which had made its way through the diaphragm. This hernial protrusion extended upwards into the chest as far as the second costal cartilage on the left side, and its size was that of a small pine-apple. In the left half of the diaphragm, at nearly the centre, there was an opening with rounded edges, about four inches in diameter ; through this opening there passed the portion of stomach above-mentioned. The opening in the diaphragm did not present a cicatricial appearance, but looked as if it had always been present. Its situation corresponded with the large scar in the side. The stomach itself, though distended, was in a healthy condition. The abdominal organs were healthy.

REMARKS.

This case presents several points of remarkable clinical interest. We have two concurrent morbid conditions. The most marked feature, persistent vomiting with severe epigastric pain and very rapid emaciation, pointed plainly to the existence of some serious gastric disorder, malignant, most probably, from the rapidity of the emaciation. At the same time we had most distinct symptoms and physical signs of phthisis, persistent hacking cough, muco-purulent expectoration, night sweats, dulness and dry râles at the right apex, these evidences being followed by those of a fresh pleuritis, and, lastly, unequivocal signs of pneumothorax on the right side, the bulging intercostal spaces, the tympanitic percussion note above, with the moveable dulness at the base, and, lastly, the bell note and Hippocratic succussion, accompanied by urgent and eventually fatal dyspnœa. The diagnosis here was certainly in favor of uncomplicated phthisis, and on this hypothesis we explained the vomiting and emaciation. The protrusion of the stomach into the thorax must have occurred towards the close of life and while the right pleura was full of air, for most certainly the condition of affairs at the autopsy, the clear tympanitic space in the left chest, would have been detected during life had it not been merged into the percussion clearness of the right chest. That the wound in the chest had been the original cause of the opening in the diaphragm is, I believe, true, and, moreover, the occasional passage of portions of the stomach through an opening gradually made larger gave rise to the attacks of vomiting is more than probable. A similar case is recorded by Lawrence, where a patient had been stabbed in the left side, between the fifth and sixth ribs. Some years afterwards death from internal strangulation occurred, and at the autopsy the whole omentum was found in the left pleura.*

Reviews and Notices of Books.

A Treatise on the Principles and Practice of Medicine. Designed for the use of Practitioners and Students of Medicine.—By AUSTIN FLINT, M.D., LL.D., late Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College, New York, &c. Sixth edition. Revised and largely rewritten by the author. Assisted by WILLIAM H. WELCH, M.D., Professor of Pathology in the Johns-Hopkins University, Baltimore, and AUSTIN FLINT, M.D., LL.D., Professor of Physiology in the Bellevue Hospital Medical College, New York. Philadelphia: Lea Brothers & Co.

For many years Dr. Flint's work has been a standard text-book not only among physicians on this side of the Atlantic, but in all countries where the English language is commonly read. It has not only been a popular work with medical students in preparing themselves for their future work, but also with the busy practitioner in his trials and difficulties. Few modern physicians have had such opportunities as the late lamented author to prepare a treatise on the science and practice of medicine; still fewer have the indomitable perseverance necessary to make proper and full use of the matter which comes under their observation.

In the preface to this edition we are told that the basis of this work is an unbroken series of records of cases continued for more than half a century. These records embrace carefully reported histories of cases in all departments of practical medicine and observed in different parts of the country. The sixth edition has been thoroughly revised, and it contains a considerable number of important chapters on diseases which have only recently been recognized and understood. Among these additions we find syphilis of the lungs and brain, spastic cerebral paralysis of children, hereditary ataxia, myxœdema, and multiple neuritis. Dr. Welch contributes the articles on Inflammation, New Formations, Degenerations, General Pathology of the Blood, and Bacteriology.

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* Treatise on Ruptures, by W. Lawrence, F.R.S., London, 1838.

Address Delivered at the opening of the Summer Session Clinic for Diseases of the Nervous System, McGill University, April 14th, 1885.—By HENRY HOWARD, M.D., Medical Superintendent Asylum St. Jean de Dieu, Province of Quebec. (Reprint from the CANADA MEDICAL AND SURGICAL JOURNAL, May, 1885.)

Medical History of Louis David Riel during his detention in Longue Point Asylum.—By HENRY HOWARD, M.D. (Reprint from the CANADA MEDICAL AND SURGICAL JOURNAL, June, 1886.)

Criminal Responsibility.—By HENRY HOWARD, M.D. (Reprint from the "Alienist and Neurologist," July, 1886.)

Treatise on the Works of the Pseudo-Metaphysicists or False Supernatural Philosophers.—By HENRY HOWARD, M.D. (Reprint from the "Alienist and Neurologist," October, 1886.)

The Physiology of Atmospheric Matter, &c.—By H. HOWARD, M.D. (Reprint from the "Alienist and Neurologist," January, 1887.)

Dr. Henry Howard, the author of the above pamphlets, has been known for many years as one of the leading psychiatrists of this country. Few men in his department have had a greater experience, and very few, indeed, have made such good use of their time and opportunities. Full of an ardent enthusiasm for the propagation of truth and knowledge, he has spent fifty years of an active life in close and unremitting toil in his work. Like all work of a similar character, it has been in a monetary point unremunerative to the author, but rich in its good results to others, as a perusal of the papers under consideration will prove. These refer to and include matters of great and varied interest.

It is impossible in the short space at our disposal to even give a sketch of their contents. Recently, we regret to say, Dr. Howard has been unable, through failing health, to attend to his duties at the Longue Pointe Asylum. So serious is his condition that his medical attendants some time ago urged him to apply for three months leave of absence. This the Quebec Government readily granted. It is the sincere hope of his many professional friends that he may yet be long spared to enjoy the fruits of a life which has been devoted to science.

Post-Mortem Examinations, with special reference to Medico-Legal Practice.—By Professor RUDOLPH VIRCHOW, of the Berlin Charité Hospital. Translated by T. P. SMITH, M.D., M.R.C.S., with additional notes and new plates, from the fourth German edition. Philadelphia: P. Blakiston, Son & Co.

An accurate knowledge of the correct procedure in the making of post-mortem examinations constitutes an important part of the medical student's education. Skill in this art is a real accomplishment to the physician, and one which is by no means possessed by the many. It can, of course, be gained by practice alone, but Virchow's guide is the recognized standard authority to go by. It is so well known that it needs no further remark than to draw attention to this new and somewhat enlarged edition.

A Text-Book of Medicine for Students and Practitioners.—By DR. ADOLF STRUMPELL, formerly Professor and Director of the Medical Policlinic at the University of Leipsic. Translated by HERMANN F. VICKERY, A.B., MD., and PHILIP COOMES KNAPP, A.M., M.D., with Editorial Notes by FREDERICK C. SHATTUCK, A.M., M.D., Instructor in the Theory and Practice of Physic, Harvard Medical School, &c. With 111 illustrations. New York: D. Appleton & Co.

This work, which has rapidly passed through several editions in Germany, has been very highly spoken of by those who have made use of it for some years. It is now presented to English readers by means of the present translation, and has been adopted as the text-book at the medical department of Harvard University. The American edition says: "I am acquainted with no work which treats of the diseases of the nervous system, in our knowledge of which advance has been so rapid of late years, so fully, concisely and clearly." It is a book which it would be well for all students to have, because it presents the German views of pathology upon all subjects, and it is not advisable to be confined entirely to the study of English and American authors only. Considering the dimensions of the work—one volume, of very reasonable size—it is surprising how thoroughly the whole domain of practical medicine is covered. We commend it to the favorable notice of all.

Manual of Differential Medical Diagnosis.—By CONDICT W. CUTLER, M.S., M.D., Physician to the New York Dispensary, &c. New York and London: G. P. Putnam's Sons.

This is a small book, almost intended for the pocket, of about 150 pages. The object of the compiler is to bring out the salient points of diseases which resemble, and still differ from, each other. This is done by arranging the chief symptoms of each in parallel columns so that the necessary comparison can be made. To effect this, it is necessary to introduce a good many dogmatic statements which, to be accepted at all, would require to be modified and explained. It would certainly serve a purpose in the way of assisting students to prepare for written or oral examinations, but there is reason to doubt if it would substantially aid them in their clinical studies of disease.

Milk Analysis and Infant Feeding: A practical treatise on the Examination of Human and Cow's Milk Cream, Condensed Milk, &c., and Directions as to the Diet of Young Infants.—By ARTHUR V. MEIGS, M.D., Physician to the Pennsylvania Hospital and to the Children's Hospital, &c. Philadelphia: P. Blakiston, Son & Co.

The title of this little work explains itself. It is full of good sense and of wise advice founded upon large experience and careful observation. All those in charge of families would do well to peruse it, and it is a treatise well fitted to be placed in the hands of intelligent parents for their guidance.

Pharmacopœia of the Montreal General Hospital.

Published by the authority of the Medical Board. 1887.

This small work will be welcome to many a practitioner who received his clinical training in the Montreal General Hospital. It contains the formulæ for many mixtures which have stood the test of a long experience. In addition to the formulæ used in general medical and surgical practice and diseases of children, there is a very complete list of those used in the ophthalmic department. There are two formulæ for solutions for hypodermic use, one for morphia and the other for pilocarpine. In each solution there is ¼ gr. of the alkaloid in every 10 minims. This, we think, is apt to give rise to confusion, as the hypodermic solutions of the British Pharmacopœia of these alkaloids is four times this strength. Would it not be safer and more convenient to make use of the hypodermic tablets which are now in common use? The work has evidently been prepared with great care, for, after a very critical examination of it, we find nothing to which we can take exception. Copies of this useful work may be obtained from Mr. Ashford, 816 Dorchester street, or from Dawson Brothers, 1336 St. Catherine street, for the modest sum of twenty-five cents.

Transactions of the Association of American Physicians.

First session. Philadelphia: Wm. J. Dornan, printer.

We have received this volume of the transactions of the first session of the Association held in Washington last June. It contains a record of the proceedings, together with all the papers read at the meeting. Most of these have already appeared in the American journals, but several are of exceptional merit and well deserve to have been preserved in this more permanent shape. The whole forms a very handsome volume.

Books and Pamphlets Received.

Transactions of the Academy of Medicine in Ireland. Vol. X. Edited by William Thomson, M.A., F.R.C.S. Dublin: Fannin & Co

The Science and Art of Obstetrics. By Theophilus Parvin, M.D., LL.D. Philadelphia: Lea Brothers & Co.

A Text-book on Surgery—General, Operative and Mechanical. By John A. Azeth, M.D. New York: D. Appleton & Co.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, December 17th, 1886.

J. C. Cameron, M.D., President, in the Chair.

Aneurism of the Innominate Artery.—Dr. W. G. Johnston exhibited a specimen of aneurism of the innominate artery, which had eroded the sternum and first and second ribs on right side. The arch of the aorta was unaffected. The right carotid and right subclavian were given off from the sac. The left carotid and left subclavian pressed upon and pushed over towards the left. The superior vena cava was obliterated through pressure at a point two inches above its origin. Azygos vein enlarged to the size of the ring finger, and communicated by a large branch with the superior intercostal vein. Superficial anastamoses of epigastric and hypogastric veins were prominent. Hemorrhoidal veins normal.

Dr. Ross said that the patient had been under his observation for eighteen months, and was never recognized as a case of aneurism of the innominate artery, but the symptoms pointed more to the arch of the aorta. The earliest symptoms were pain at the back of the neck and shoulder of a neuralgic nature, accompanied with cough. These were relieved by potassium iodide. The patient got better of his first attack, but was frequently laid up in hospital. Enlargement of the superficial veins of the abdomen and thorax was early evident, but lately the superficial veins were tortuous and as large as a man's finger. The patient also exhibited signs of intra-thoracic pressure—such as paralysis of the right vocal cord, rattle in the larynx, and signs of pressure on the trachea.

Dr. R. L. MacDonnell had had the case under observation for the last fourteen months, both in his wards in the Montreal General Hospital as well as during the past summer when the patient was earning his living as a night watchman. There were two points of clinical interest in the case. In the first place, the results of the use of the sphygmograph were deceptive. The tracings obtained showed very marked interference with the blood current through the left radial, hence he had assumed that the aneurism was situated on the arch at a point beyond the giving off of the innominate artery, the fact being that the great dilatation of the innominate artery caused not an impediment through that channel, but by its bulk had pressed upon the subclavian and disturbed the flow of blood to the left upper extremity. In the second place, the relief afforded by the iodide of potassium had been most effectual. Whenever the drug had been discontinued, or whenever the patient had been unable to obtain it, the pain and dyspnœa had increased. This effect had several times been noted, and particularly by the patient himself.

Dr. Wilkins referred to a case in his practice where there was obliteration of the superior vena cava from clot, which produced no varicosity.

Dr. Ross said one of the early symptoms of the case was a suffused appearance of the face, but the varicosity did not progressively increase ; it was sudden and at the last.

Typhoid complicated with Diphtheria.—Dr. Johnston exhibited for Dr. Nealson specimens from a case of typhoid fever complicated with diphtheria. There was a well defined membrane covering the fauces and extending through the larynx to the smaller divisions of the bronchial tubes. The spleen was enlarged, and there were typhoid lesions in the intestines.

Dr. Kennedy stated that the patient had consulted him about a week prior to his being sent to hospital. The symptoms present were somewhat anomalous. There was acute bronchitis with congestion of the base of both lungs. On the second day of attendance a rash made its appearance over the face and back, and as there were two children sick with measles in the next room it was looked upon as being a severe case of measles. On the following day the patient exhibited typhoid symptoms, which increased in severity during subsequent days. Typhoid fever was clearly apparent, and the patient was sent to the hospital. The peculiarity of the case appears in the probable co-existence of measles with typhoid fever. The severity of the subsequent symptoms and rapid termination seems to strengthen the possibility of this combination.

Congenital Absence of the Petrous portion of the Temporal Bone.—DR. R. L. MACDONNELL exhibited the skull of an idiot which had been dissected at McGill College. There was on both sides deficient development of the petrous portion of the temporal bone. The base of the skull, as seen from within, was flat, the petrous bone not forming the normal ridge between the middle and posterior fossæ. The organs of hearing had never reached development, there being in reality but a rudimentary tympanic cavity. The foramina through which the various nerves passed were small. No previous history of the case had been obtained. The subject presented several other abnormalities. 1. The right common carotid divided into its external and internal division opposite the lower border of the thyroid cartilage. 2. The left common carotid did not divide at all, but was continued upwards as the internal carotid ; the superior thyroid and lingual arteries were given off this common trunk, and the facial from the lingual. 3. The hypoglossal nerve was given off from the pneumogastric. 4. There was deficient development of the teeth. The bicuspids were represented by small round pegs. The molars were ill formed, small, and rounded like milk teeth.

DR. WILKINS, 1st Vice-President, then took the chair, and

DR. CAMERON read a paper on " *Aseptic Midwifery.*" (*See page* 462.)

Discussion.—DR. KENNEDY agreed with Dr. Cameron in his conclusions. He rarely allowed a patient to have a douche ; always believes in using it in person, as he found nurses, as a rule, unreliable. He could tell by the temperature chart in the hospital which nurse had charge of a ward. He did not believe in the use of a douche unless there had been operative procedures.

DR. RODDICK said he was always interested in antisepsis, and had long believed antisepsis to be as important in midwifery as in surgery, but from his experience, as well as from the facts in the paper, he now regarded it of even more importance in the former. In 1877 he had been asked to give some rules for the guidance of a friend, then superintendent of the Hamilton General Hospital, and had laid stress on the use of antiseptic injections previous to delivery, as before operations in surgery. The results were good in Hamilton, though only tried for a very short time. He thought the excellent results obtained in the Queen Charlotte Hospital were largely due to the previous washing out of the vagina, as the discharge before labor was often septic.

DR. ALLOWAY thought no subject was of more importance than aseptic midwifery.. Owing to its acceptance the mortality had notably decreased during the past five years. It is rare now to hear of septic cases, much less of death. For the last five years he had been an antisepticist, and had not witnessed a single death during that period, though, through nurse or midwife examining patients, he has seen many cases of septicæmia. He cited, as an example, where one midwife had lighted up several septic cases. Dr. Roddick's importation of Listerism had induced him long ago to apply it to midwifery cases. Dr. Cooper of New York reports 40,000 cases in Vienna with results similar to those stated by Dr. Cameron. He (Dr. Cooper) insists on using corrosive sublimate whenever there is any abrasion of the vagina.

DR. TRENHOLME said he had never had a case of septicæmia in his practice, though he never uses a tube, and believes this result due to his great care in removing the membranes and placenta entire.

DR. SHEPHERD called attention to the results, as stated by Dr. Cameron, of removing by the curette any adhering portions of the placenta as soon as septic symptoms appear.

DR. CAMERON, in replying, stated that the use of the jute pad and iodoform to the vulva after delivery was analogous to the mode of stopping a test tube in germ culture. There is always danger of carrying in air with the douche, and for that reason prefers the dry dressings.

CANADA

Medical and Surgical Journal.

MONTREAL, MARCH, 1887.

WHAT IS CADAVERIC RIGIDITY ?

The doctrine taught in all the physiological text-books up to the present is that *rigor mortis* is due to coagulation of the myosin after the death or contemporaneous with the death of the muscular tissues. This view seems to have been long ago questioned by Schiff. He maintained that cadaveric rigidity was the last act of the life and not the first consequence of the death of muscle ; he does not, however, seem to have given any very strong reasons for his belief.

Brown-Séquard called attention to some very striking facts long since which he has very recently formulated into a precise theory. He noticed that contracture might last after death for from five to twenty minutes or more ; that a contracture could intervene and disappear more than once during the first two hours after death ; that local cessation of the circulation artificially produced by ligature is followed by rigor, which disappears on removing the ligature.

Brown-Séquard finally concludes that though a coagulation of albuminous substances can contribute to the production of cadaveric rigidity, the principal and sometimes the only cause of this condition of the muscles seem to be a true contracture, an act of life, though it exists in the cadaver.

The matter has also been investigated by Hersen, who arrives at a similar conclusion on evidence furnished by physiological experiment. He holds that the contracture following somatic death is owing to the stimulating effect of the waste products of the muscular metabolism which, when the circulation is intact, are, of course, constantly removed. He would thus explain the action of a ligature as referred to above; the stimulus in this case is a chemical one, and the result wholly independent of the nervous system.

After section of the sciatic nerve in a rabbit it was poisoned with strychnia; the limb on the side of the divided nerve did not, of course, partake in the general convulsions that followed, and accordingly passed into *rigor mortis* later. Such an experiment goes far to support this theory. If this explanation be sound, one would expect that, in cases of hemiplegia, cadaveric rigidity would occur soonest on the sound side, where the muscular metabolism would naturally be greatest, and with a view of testing this matter, observations are being now made in the Montreal General Hospital.

It will be seen that the new explanation does not necessarily supplant the old one of coagulation of myosin; it only furnishes a supplementary cause of rigidity, for there can be no doubt that coagulation of myosin does occur, and rigor may be thus artificially induced in a decapitated frog by gradually raising the temperature to 40°–45°C.

ARTERIO-SCLEROSIS.

Prof. Thoma of Dorpat has recently published a series of careful researches upon the nature of arterio-sclerosis in the larger vessels, including atheroma. He considers the condition as commencing primarily as an expansion and distortion of the media; the intima then becomes thickened by a process of compensating hypertrophy, having as its chief object the restoration of the vessel lumen to a circular or oval form, the fibrous material thrown out for this purpose may degenerate, thus producing atheroma. From this it would appear that over-exertion is the primary cause in the formation of aneurisms, and that primary atheromatous degeneration as a result of syphilis is less common than has been supposed. The novelty in Prof. Thoma's methods consisted in his employing means of obtaining sections of the large arteries under exactly the conditions in which they occur in the body during life. At an autopsy an atheromatous spot projects above the level of the normal intima. Thinking this might be largely due to the removal of the blood-pressure, he employed parafin injections under a pressure of 7.6 cm. of mercury, the artery when containing this mass being ligatured and hardened in alcohol. It was then found that instead of the media forming a regular circle or oval at the atheromatous spot it was always bowed outwards. The apparent projections of the intima serving only to restore an even contour to the lumen of the vessel.

ON THE DIAGNOSIS OF CANCER OF THE STOMACH.

It is a well known clinical fact that cases of cancer of the stomach may be attended by such marked symptoms as to preclude the possibility of an error in diagnosis. On the other hand, the course of this disease may be so obscure that a diagnosis may be impossible during life. It is not, infrequent, however, to see another group of cases where, from the general wasting, we may suspect carcinoma, but where, owing to the absence of local symptoms, it is impossible to come to a definite conclusion. Every physician must have experienced the great anxiety necessarily attendant on the treatment of cases where he has had to wait month after month before he could finally communicate to his patient the presence or absence of a grave organic disease. From recent researches it appears highly probable that in these doubtful cases we have, in the presence or absence of hydrochloric acid in the gastric juice, an indication whether there is carcinoma of the stomach or not. Von den Welden, Ewald, Debove, Dujardin-Beaumetz and others have found that in cancer of the stomach there is an entire absence of hydrochloric acid in the gastric juice. Ewald even found the gastric juice free from hydrochloric acid in a case of cancer of the duodenum, where the examination was conducted an hour after a meal. The patient was a woman aged 67. She complained of pain over the pit of the stomach and loss of appetite. A diagnosis of gastric cancer was made, although no vomiting was present and no tumor could be detected. The filtrate of the contents of the stomach dissolved albumen slightly at the temperature of the body. On adding hydrochloric acid, the albumen was acted on more effectually. Repeated examinations of the contents of the stomach during active digestion failed to discover any hydrochloric acid ; lactic acid was always present, peptone always, and propetone occasionally. The treatment pursued was the internal administration of condurango wine and hydrochloric acid. The patient gradually became weaker, and died eight months after the beginning of her trouble. At the autopsy not even a trace of carcinomatous infiltration of the stomach could be found. In the duodenum, a few centimetres below the pylorus, an old ulcer with thickened walls was discovered ; its base was adherent to the liver. On microscopic examination, the walls of the ulcer were found to be the seat of commencing carcinoma. The question naturally arose : What was the cause of the entire absence of hydrochloric acid in the gastric juice, seeing that this viscus, with the exception of thin walls, appeared to be perfectly healthy ? On microscopic examination, the greater part of the mucous membrane of the stomach was found to be degenerated. This degeneration was particularly advanced in the fundus and cardiac end. In fact there was hardly a trace of the normal structure in this region. The mucous membrane was very thin, and consisted simply of homogeneous tissue in which were imbedded a few round cells. The debris of the normal gland structure was recognized by staining. In the pyloric region the glandular structure was still existing. The microscopic examination made clear why no hydrochloric acid was secreted. It was owing to the complete disappearance of the "fundus cells."

The case confirms the observations of Heidenhain that the whole glandular structure of the stomach secretes pepsine, while only the fundus cells originate hydrochloric acid. Digestion was accomplished in this case, as peptone and propeptone were found on all occasions. It must have been accomplished by the pepsine and lactic acid.

It remains to be seen whether all cases of at least cancer of the stomach are attended by degeneration of the mucosa of the fundus and cardiac end of the stomach. From the number of observations already made this appears probable. If so, we then have a valuable means of deciding the nature of doubtful cases. To have an entire absence of hydrochloric acid during digestion it is necessary that there should be extensive degeneration of the fundus glands. Why these should degenerate while the peptic glands still in a measure retain their functional activity it is difficult to see. To test for hydrochloric acid it is necessary that the stomach should be empty, for the presence of food materially influences the quantity of acid found. We have then to provoke a secretion of gastric juice independent of food, remove it, and test for the acid.

Leube's method, which is considered the best, is to introduce into the stomach a hundred cubic centimetres of ice-water, and after waiting for ten minutes, introduce three times the above quantity of water at the ordinary temperature. The whole is then removed and tested for hydrochloric acid in the following way: Two test tubes are taken, and into each is placed fifty cubic centimetres of distilled water, colored by a few drops of a two per cent. solution of gentian violet. Into one of the tubes a few drops of the liquid removed from the stomach is introduced. If the fluid contains even a minute trace of hydrochloric acid there will be a change in the colored solution from blue to red. If it is free from the acid, the liquor will remain blue. The procedure entails some trouble and annoyance to the patient, but if it is as valuable as is maintained, it is well worth a trial in doubtful cases. If by proving the presence of hydrochloric we eliminate cancer, our patients will certainly gladly put up with the disagreeableness of the method.

ANTIFEBRINE.

Drs. Cahn and Hepp, assistants in Kussmaul's klinik, have recently given the results of their extensive experience of the use of antifebrine as an antipyretic. Being the first to make use of this agent in the treatment of disease, they have paid very close attention to its working. In all they have treated sixty cases with it, half of which were typhoid fever. They have not noticed any specific action in any of the numerous diseases in which it was administered. Riese and Landgraf (*Deut. Med. Woch.*, No. 47, 1886), however, look upon antifebrine as having a direct and specific action in acute rheumatism; that is, an action beyond its purely antipyretic one.

There is no doubt about the marked antipyretic influence of this agent, very numerous reports from many different sources confirming the first reports made of its action are recorded.

It would appear to be even more certain in its action than antipyrin. The dose varies from five to fifteen grains. The fall and subsequent rise of the temperature are always gradual. The greatest fall occurs from two to six hours after a full dose. Rigors do not occur. The frequency and tension of the pulse diminish with the falling temperature. A dicrotic pulse frequently looses this character after one or two doses of antifebrine. Frequently it produces profuse diaphoresis and diuresis. It does not disorder digestion. It has not been definitely determined what changes it undergoes in the organism. Chemically it can be resolved into aniline and acetic acid. As a pure antipyretic, it will probably replace all agents of this class. Lepine (*Semaine Med.*, 47, '86) has reported good results from its use in neuralgia, tremor, and the pains of tabes dorsalis.

ISOLATION OF FLUORINE.

Probably the most interesting discovery that has been made in chemistry for many years is the method of isolating fluorine lately described by M. H. Moissan (*Comptes Rendus*, Vol. CIII, page 202). This element, though its existence was proved by Ampere in 1810, has stubbornly resisted the innumerable attempts that have heen made to liberate it from its compounds. The intense affinity of fluorine for all other substances, epecially for glass, seemed to preclude the possibility of our ever obtaining it in a state of purity, for, like the universal solvent so long sought after by the alchemists, if it were isolated, it seemed improbable that any vessel could be found that would hold it. M. H. Moissan, however, in the memoir referred to above, describes a method by which he has successfully brought to light this coy element. He shewed that it was possible to decompose absolutely dry hydrofluoric acid by means of an electric current. At the negative pole hydrogen collects; at the positive pole a gas is disengaged having novel properties.

The experiment was performed in a platinum U tube, with platinum electrodes. The tube was filled with dry hydrofluoric acid kept in a liquid state by surrounding it with methyl chloride, thus reducing the temperature to —23°C. A current from 20 Bunsen cells, large size, was then passed through the liquid by means of the electrodes. This current was completely arrested when the acid was perfectly anhydrous; so to make the liquid conducting, small particles of potassium fluoride were introduced. From the positive pole there was a regular disengagement of a colorless gas possessing among other properties the following: Quartz and silicon burn brilliantly with formation of silicon fluoride. Sulphur takes fire in it, and even iodine burns with a pale flame. Water is decomposed in the cold hydrofluoric acid and active oxygen (ozone) are formed. Organic bodies are violently attacked; cork carbonizes and inflames in the gas; alcohol, ether, benzol, turpentine and petroleum take fire on contact. The gas evolved at the negative pole was hydrogen, and burned with its characteristic blue flame.

On one occasion, when the experiment had lasted several hours, and there was not enough hydrofluorine acid left at the bottom of the tube to separate the fluorine from the hydrogen, these two gases recombined in the dark and at the low temperature of the experiment with violent detonation.

Thus have the predicted properties of fluorine, founded on its atomic weight, been fully realized. It is the most active and energetic of all the elements. Its affinity for hydrogen is far greater than that of chlorine, and it has now been proved to be exactly first in the series of electro-negative elements.

Moissan probably owes his success more to his great care in having all his apparatus and materials perfectly anhydrous than to the ingenuity of his apparatus.

PULMONARY GANGRENE.

Dr. Ufredezzi, of Prof. Foa's laboratory, has recently published a study of pulmonary gangrene based on ten cases which he observed. Two of these were caused by the swallowing of gastric juice, and showed no bacteria beyond a few putrefactive ones. The other eight cases all showed the well known staphylococcus pyogenes, the microbes of acute suppuration, which were abundant in the necrosed tissues, sparingly present in a zone of small cell infiltration surrounding it, and absent in a hemorrhagic zone which he observed at the periphery in all the cases. Five of the cases were secondary, and in cases of local suppurative disease in various parts of the body, two being in joints, the other three were due to the direct insufflation of necrosed tissues from gangrene of the tongue, erysipelas, and disease of the hyoid bone. He calls attention that in the condition we call gangrene characterized by a peculiar odor, the essential condition of necrosis has nothing to do with the special feature by which it is usually recognized, the latter being merely due to the occurrence of putrefaction after the necrosis has occurred. The uniform occurrence of staphylococcus aurens in so many consecutive cases is noteworthy, but does not imply that other organisms or causes may produce a like result in other cases.

BACILLUS OF TYPHOID FEVER.

Recently several independent observers have attempted to prove that the bacillus found in typhoid fever is pathogenic. It seems that considerable doses produce enlargement of the mesenteric glands and spleen, with follicular ulceration of the small intestine, in mice, whether given subcutaneously or by intra-peritoneal injection—the effects being apparently in direct proportion to the dose. No effect whatever could be obtained upon rabbits or guinea-pigs. It is doubtful if real typhoid does occur in these animals however, and these results cannot be considered conclusive.

An Endemic of Cerebro-Spinal Meningitis.—A curious outbreak of this disease, limited to one household, is recorded by Dr. Ricard of this city in the last number of the *Union Medicale du Canada.* Five children of the same family were all attacked within a short time of each other, and all presented very similar symptoms. The parents are remarkably healthy people. The first case was in a boy of six. He complained suddenly of intense headache and pain in the back —then vomiting and high fever—marked retraction of the head and intermittent painful spasms—purpuric spots on the lower extremities and a vesicular eruption upon the face and ears--hyperæsthesia and great irritability. During convalescence, delusions with terror, seeing serpents, &c. He recovered, but has remained quite deaf. The second, a boy of eight, was taken down three weeks later with similar symptoms and, in addition, great pains in certain muscles, and inflammation in the metacarpo-phalangeal joints of one hand—delirium very great for a long time. Recovered. Two weeks later the baby ten months old—fever, vomiting, retracted head, tetanic spasms accompanied by sharp cries, and prolonged somnolence—purpura upon the trunk and limbs. Recovered. Ten days later two more were attacked, a boy of four and a girl of six. The former was reduced to a mere skeleton, but ultimately got well. The latter, a delicate child, after the symptoms above detailed, fell into a state of stupor with dilated pupils, strabismus and marasmus, and finally died. We are not aware of this disease having been observed elsewhere in this form in Montreal, and such a local outbreak as this is difficult to account for.

THE BRITISH MEDICAL ASSOCIATION.

A recent number of the *British Medical Journal* takes up the subject of the formation of branches of the British Medical Association, and urges upon the profession in Canada the advantages that would result from their joining in the movement. An application has already been received from the medical men of Halifax, N.S., for the organization of a Branch in that city, and other cities are expected to follow. What would be gained by having direct connection with the parent Society in Great Britain is thus alluded to by the *Journal:*

"The pages of the *Journal* afford to all the Branches the opportunity of a systematic record of their proceedings and the means of addressing what is now practically the whole body of the educated and intelligent practitioners of Great Britain. The by-laws by which each Branch is governed, subject to certain general regulations which time and long experience have shown to be advantageous, are capable of very large modification to suit the needs and wishes of the Branch; while the influence which the British Medical Association has gathered in its long years of growth by the efforts of the many able, eminent, and self-sacrificing men who have guided its councils, and raised it to great power in the profession and in the State, is always at the command of any of its Branches in response to every legitimate appeal. This influence is felt not only in the decision of social and ethical questions affecting individuals, but in appeals addressed to Municipalities, Governments and States. There are few circumstances arising in the medical polity of any colonial dependency which have not some direct relation to precedents existing in the previous history of Great Britain or of some other part of the Empire ; and the Parliamentary and scientific committees of the British Medical Association have now a recognized influence in the councils of all the great bodies of the State. We venture to hope that the material, social, and scientific advantages of membership of the Association may commend themselves very extensively to our medical brethren in Canada. We can promise that our pages will be readily opened to contributions from our colleagues in the Dominion ; no visitors are more welcome at the annual meetings of the Association, which are held at a convenient season in the autumn, than our brethren across the sea. In heartily welcoming the new Canadian branch, we also express the hope that a large accession of members throughout the whole Dominion may accrue to the Association, and that a network of Branches will be formed which will constitute a true medical federation uniting the whole profession in Great Britain and in Canada in the closest bonds of social, scientific and fraternal intercourse."

It is true that in Canada we have already some good working societies, such as in Toronto, Montreal, and in many districts, which are purely local. We have also a very active Provincial Association in Ontario, and we have the Canadian Medical Association, whose interests take a wider scope ; but it is a matter for the consideration of the profession whether the formation of branches of the British Association would not be found to forward that which is the object of all, viz., the advancement of the profession, and to assist in giving it that influence which it should everywhere possess.

GYNÆCOLOGISTS *vs.* GENERAL SURGEONS.—The committee of the "Liverpool Hospital for Women," in their recent report, went out of their way when they recommended that in future operations on the liver, kidneys, spleen and other abdominal viscera should be left entirely in the hands of general surgeons. To whom do we owe the great advances of modern abdominal surgery generally, if not to gynæcologists ? Many of the operations now performed for the relief of diseased conditions of the liver, spleen and kidneys were never even attempted before the establishment of special hospitals. Fortunately the recommendations of the committee will not have any permanent influence in preventing the gynæcologists from taking part in the further progress of abdominal surgery. These cases will find their way into the hands of the men best able to deal with them. Every competent and unprejudiced onlooker must feel that the general surgeon of the present day has not proven himself equal to the gynæcologist in abdominal surgery.

NOTES AND COMMENTS.[*]

Pasteur's work on Rabies continues to excite the greatest interest. It is stated that the English commission will report favorably upon the method and advise the establishment of a London Institute. On the 7th ult., Dr. Ernst, Demonstrator of Bacteriology at Harvard, read a paper before the Philadelphia Academy of Surgery giving the results of his studies on rabies, the virus of which—in the form of infected rabbits—was obtained direct from Pasteur's laboratory. Entering upon the work as a skeptic, and uninfluenced by personal considerations—not having studied with Pasteur—his investigations have a special value. He finds (1) a specific virus most concentrated in the brain and cord; (2) that this virus can be attenuated and gradually loses its strength; (3) that by the process of vaccination immunity can be given to rabbits. The question is not, however, finally settled. At the meeting of the Paris Academy of Medicine, Jan. 18th, M. Peter made a violent attack on Pasteur's method and claimed that several of the persons recently inoculated had died of paralytic rabies, induced by the vaccinations. In his last communication, von Frisch of Vienna states that after infection with ordinary street rabies, the preventive inoculations are always futile, and, further, that healthy dogs submitted to Pasteur's preventive treatment by the rapid method *become rabid.* This is, indeed, serious, and lends support to Peter's statement. Time and more work will give us the truth.

Dr. H. D. Schmidt, Pathologist to the Charity Hospital, New Orleans, is a man who has suffered in no small measure "the slings and arrows of outrageous fortune." Terribly crippled with rheumatism, which recurs in prolonged and painful attacks, he keeps on bravely, and has recently issued a monograph "*On the Origin and Development of the Bacillus Tuberculosis*" (the Clark and Longley Co., Chicago). It will be remembered—such things *always* are—that shortly after Koch's memorable discovery, Schmidt fell into the error of mistaking fat-crystals for the bacilli. This was hard luck, and a scientific *faux pas* at which many microscopists were inclined to scoff. From his recent researches Dr. Schmidt arrives at conclusions which run counter to our present ideas, and which will not be acceptable to the experts who have studied this question. He holds that the bacillus is a *bacterium*, which is, however, a minor matter, and that it develops in the nuclei of the cells; and suggests, as an explanation of its presence, that it may be formed from the protoplasm of animal cells, the vital activity of which is on the wane or is undergoing involution. In other words, he returns to the theory of heterogenesis, and thinks it possible that "the normal arrangements of the molecules of the protoplasm of the nucleus of an animal cell may, under certain conditions of the organism, be altered in such a manner as to correspond with that of the molecules of vegetable protoplasm." This seems rank heresy in these days of staining fluids and cultures.

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[*] By the kindness of the Editors, I shall have the privilege of occupying, periodically, a few pages of the JOURNAL with comments on matters of general professional interest, and with notes on practice, books, and men. WILLIAM OSLER.

What has become of the opponents of the germ theory? They seem to have been buried under the avalanche of bacterial literature which is pouring from the press. They are very quiet in England, even Dr. Bastian has not said anything since the debate at the International Congress in London; in Germany ??; in France, Jaccoud and Peter occasionally enter protests, but Cornil and Lancereaux have carried the profession with them, and the younger generation of workers, to a man, have stained fingers. The truth is, that the current has been too strong and the majority find it easier to float with than swim against it. In this country there is a remnant, and Dr. Morris Longstreth has recently published a long article from the old standpoint entitled "Against the Germ Theory" (*Therapeutic Gazette*, Nov. 1886). He, like Schmidt, favors heterogenesis. It gives one rather a shock, but this may result from undue saturation with other views.

Antifebrin is a new remedy, introduced from Kussmaul's clinic at Strasburg, which seems to possess the virtue indicated by its name. It is the product of the action of acetic acid on aniline at a high temperature. The reports of its use are so far favorable. We having been using it for the past three months and find the action tolerably constant. A dose of eight grains (in warm water or in spirits and water) will usually reduce the temperature from three to six degrees. There is sweating, often profuse, but not more than after thallin and antipyrin. In the twenty-five cases in which it has been given in my wards, it has failed three times, two cases of pneumonia and one of peritonitis. It does not disturb the stomach, has not once caused vomiting, and even where the temperature has fallen seven degrees in three hours there have not been symptoms of collapse. Cyanosis, noted by some, has not occurred. It is a cheap drug; Merck's, which we have used, is only 60c. an ounce, while thallin is 75c. and antipyrin $1.50.

Strophanthus, the new heart tonic, introduced by Professor Fraser of Edinburgh, is at last in the market, and can be obtained in the form of tincture. A supply of the seeds has arrived from the African Lakes Company. Two London houses cornered the market and ran up the price of the seeds from 80*s*. to 160*s*. per lb. Burroughs & Wellcome's tincture can be obtained here at 75c. an ounce, and Parke, Davis & Co. will soon have an ample stock. Reports indicate that this is the most active heart tonic yet discovered, more powerful than digitalis, and more rapid in its action. Let us be contented if it turns out to be as good as the priceless foxglove. I have not yet been astonished by the promptness of its action, but we are using it tentatively, and may not have reached, with the tincture, the effective dose.

In the medical wards of the Philadelphia Hospital an odd sight may now be daily witnessed. The resident physician, with large rubber bag full of gas, approaches the bed of a phthisical patient, who at once assumes the lateral decubitus, exposes the anus, when from two to three quarts of the gas are slowly injected into the bowel. This is the new treatment of phthisis, introduced by Bergeon of Lyons, and already loudly vaunted. The principle is an old one, announced many years ago by Claude Bernard, who found that gases injected *per rectum* were absorbed and exhaled by the lungs. Bergeon has applied this to the treatment of pulmonary diseases, and finds that with the sulphuretted hydrogen—the best gas to use—many cases of phthisis are greatly relieved; the pulse is lowered, the temperature falls, the expectoration is lessened, and the night sweats are checked. Bergeon advises the use of carbonic acid passed through the natural sulphur waters or through a tube containing the sulphuret of carbon. In the *British Medical Journal* of December 18th, Dr. J. Henry Bennett gives some interesting facts concerning this method, which in some cases seems to accomplish the results claimed by Bergeon.

In the last Johns-Hopkins University circular there is an interesting statement regarding the pathological department, which has been organized under Professor Welch. The laboratory as now equipped is the only equivalent in this country of a German pathological institute, and already seventeen physicians are enrolled as students. The hospital is nearly ready for occupation, and within a few years the medical school will be established, from which much may be expected for higher medical education.

Of recent books, Professor Strümpell's *Practice*, edited by Dr. George Shattuck of Boston, will give to English readers one of the best of German text-books by one of the rising clinicians of Europe. Dr. Strümpell was assistant to Wunderlich and to Wagner in Leipsic, and now holds the chair of medicine at Erlangen. On diseases of the nervous system the work is exceptionally good.

Dr. H. C. Wood's *Nervous Diseases and their Diagnosis* is a very successful attempt to deal systematically with "the phenonema produced by diseases of the nervous system, with especial reference to the recognition of their causes." It will prove a boon to the practitioner lost in the maze of the new science of neurology.

Upon Dr. Parvin's *Midwifery* I cannot offer an opinion, but it looks a practical text-book, and the embryological and physiological parts, of which I can judge, are well written.

Surgeons will welcome the exhaustive monograph *De l'Intervention Chirurgicale dans les Affections du Rein* (Paris, G. Masson, 1886) by your townsman, Dr. A. Brodeur of Laval University. It forms a complete history of the surgery of the kidney, and a study of the cases therein narrated will be of great service in the diagnosis of obscure renal conditions.

The second edition of Finlayson's *Clinical Manual* should be in the hands of every hospital student. It has been a long time appearing, but there are many additions and improvements, and it forms an admirable *vade mecum* for ward work.

A "guide of life" for the physician, corresponding to Herbert's *A Priest to the Temple*, has not yet been written, but an excellent equivalent is the *Religio Medici* of Sir Thomas Browne, which I mention to call attention to the fact that a cheap Edinburgh edition has recently been issued, with an essay on the author by that quaint old philosopher, Sir Kenelm Digby.

Medical Items.

—Prof. Beclard, the distinguished physiologist, and Dean of the Medical Faculty in Paris, is dead.

—Professor Grawitz has been appointed Ordinary Professor of Pathological Anatomy in the University of Greifswald.

—Professor Billroth, the distinguished Vienna surgeon, has been raised to the Austrian peerage.

—Prof. Roddick has been forced by ill-health to resort to a southern climate. He has been spending some weeks in Florida. He is expected home early in March, to return, we hope, with fully restored vigor.

—Dr. William Gardner, Professor of Gynæcology in McGill University, has been appointed a vice-president of the British Gynæcological Society. We congratulate our distinguished townsman on this evidence of the appreciation in which he is held abroad.

—Carl Schröder, the distinguished gynæcologist of Berlin, died on the 7th ult. after a short illness. Death was due to an old encapsuled abscess the size of a walnut, situated in the right fornix, bursting into the ventricle and setting up a fibrinous suppurative inflammation. In our next number we will present our readers with a sketch of the life-work of this great man.

A NEW COMBINED SPECIALTY.—The following advertisement is clipped from one of our daily papers:

> DR. ——— (M.D., University of Rome, Italy, degree confirmed after examination by the Faculty of Medicine of the Province of Quebec) has the honor of offering his professional services to the public. After long experience in different climates, a very happy result is guaranteed in all chronic diseases, especially in Dyspepsia, Asthma and Bronchitis, etc. Specialty—Diphtheria, Accouchment, and Sicknesses of Women in general. Office, ——— street.

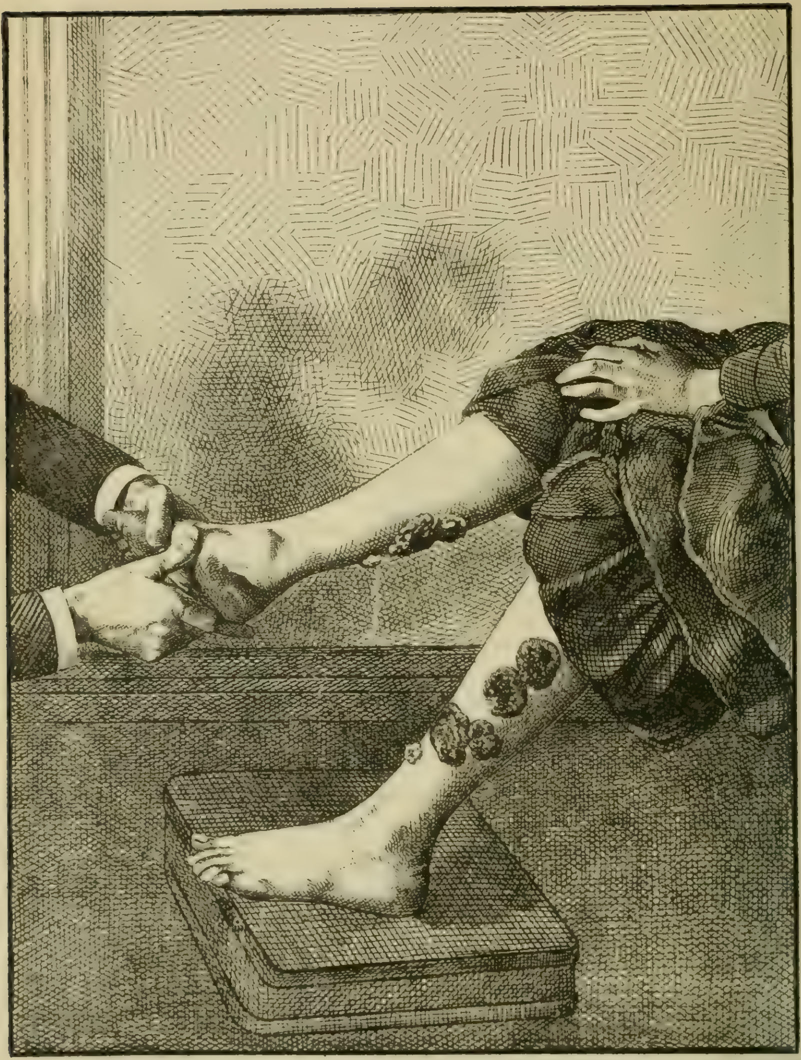
The association of *Diphtheria* and *Obstetrics* (*!*) as a combination-specialty certainly is original. The average medical mind will find it hard to believe that the operator is safe in "guaranteeing" a "very happy result"—except it be euthanasia!

—Scott & Bowne, manufacturing chemists of New York, make a specialty of producing an emulsion of cod liver oil with hypophosphites. Their great care in selecting the oil and in making the combination is amply proven by the high therapeutical value set upon the emulsion by the profession. It is no new remedy, but has been steadily growing in demand for a number of years. It is certainly very useful in restoring wasting tissue, and in cases of scrofulosis is highly beneficial.

—Dr. Charles H. Chalkley, of Richmond, Va., writes to Battle & Co. of St. Louis describing two samples of "Bromidia" as follows: Sample No. 1 is reddish-brown in color, slightly opaque, and not very disagreeable to the taste. Doses of one or two drachms have a decided hypnotic effect. Sample No. 2 is of a light greenish-brown color, perfectly transparent, and intensely disagreeable to the taste, being bitter and acrid, and bearing evidence of containing no coloring matter whatever. The dose of one or two drachms does not have as decided and prompt an effect as in the case of No. 1. It appears that No. 1 is the correct thing, and is to be distinguished from spurious articles such as No. 2.

TRADE-MARK CASE.—Some time since an action was brought in Brussels against English dealers in extract of meat, to prevent them from using the title of "Baron Liebig's Extract," or from placing the photograph of the late Baron Justus von Liebig on their jars or in any way using the name or title of Baron Liebig. The action was brought by the Liebig's Extract of Meat Company, and was successful. The English dealers thereupon took the case into the Court of Appeal. The judgment was given last week, confirming the decision of the Tribunal of Commerce and condemning the English dealers, who were defendants in the action, to pay damages and also restraining them from making any further use of the name of Liebig or Baron Liebig, or of the photograph, this right being declared to be the exclusive property of the Liebig's Extract of Meat Company.—*Times.*

MR. JAMES STARTIN ON CASES OF SKIN ERUPTIONS AND SYPHILIS TREATED WITH HORSFORD'S ACID PHOSPHATE.—"It appears to me that the 'Acid Phosphate' originally prescribed by Prof. Horsford of Cambridge, U.S.A., is not so well known in this country as its merits deserve. A glance at the formula will, however, readily convince one of its value in suitable cases. Each fluid drachm gives on analysis 5 1-2 grains of free phosphoric acid, and nearly 4 grains of phosphate of lime, magnesia, iron and potash. The following is a brief note of a case in which I prescribed it with complete success: Mr. G., aged 69, consulted me November, 1885, for eczema on the arms, legs, palms of the hands, and trunk. The patient complained of much debility and nervous exhaustion, and he was a man who had led a very busy business life, with much worry. In Dec., 1885, I prescribed Horsford's acid tonic with much good effect, as in Feb., 1886, I heard that he was quite well."—*Med. Press, London, Eng.*



THE BURLAND LITH. CO.

PHOTO. BY MR. HEWITT.

CASE OF BROMIDE ERUPTION.

(See page 515)

CANADA
MEDICAL & SURGICAL JOURNAL

APRIL, 1887.

Original Communications.

CASE OF DERMOID OVARIAN CYST WITH TWISTED PEDICLE—OPERATION—RECOVERY.

BY WILLIAM GARDNER, M.D.,
Professor of Gynæcology, McGill University; Gynæcologist to the Montreal General Hospital.

Mrs. S., aged 31, was admitted to the Montreal General Hospital under the care of my friend Dr. Molson, with symptoms of acute pelvic inflammation, and after a few days by him referred to me. In brief, her sexual and menstrual history is as follows: The catamenia appeared first at the age of 19. She has been married eight years; five pregnancies, four times to full term; one miscarriage. The last pregnancy proceeded to full term, terminating fourteen months previous to her present illness. The child was suckled ten months; menstruation returned in due time after weaning. Ever since the last birth she has suffered from pain in the left iliac region, where, four months ago, she first noticed a tumor. Three weeks previous to my first seeing her, after a walk she was seized with severe pelvic pain, vomiting, fever and retention of urine. These symptoms continued, latterly, however, with some abatement, till the time I first saw her. The tumor had meanwhile increased decidedly in size.

On examination, a thin-walled, distinctly fluctuating, intensely tender cyst of the size of a child's head was noticed projecting the lower part of the belly. Per vaginam, the uterus was enlarged, retroverted and fixed, with a tender swelling behind it.

There was still retention of urine, fever and vomiting, full doses of morphia being necessary to relieve pain. The diagnosis was probable ovarian cyst, with peritoneal inflammation.

Operation on the 4th February, 1887, Dr. Alloway assisting and Dr. Gurd giving the ether, the Hon. Senator McMillan of Alexandria, Ont., being present, as also four medical students. Median incision three inches long. Universal, but not intimate parietal, omental and pelvic adhesions. The cyst wall, on being exposed, presented a greyish-black appearance. On tapping it a creamy thick fluid, at first supposed to be pus, flowed out, but on cooling it became solid, while the escape of hairs promptly revealed the dermoid character of the tumor. On delivering it the pedicle was found to be very long and thin, and rotated three times from left to right. After ligature and removal of the cyst, the right ovary was found to be enlarged to the size of a pullet's egg and cystic. It was also removed. The cavity was thoroughly washed out with warm water, and drained. Recovery was easy and uninterrupted, save for a mild attack of phlegmasia of the left lower limb. The temperature reached 100° only once, and that was when the phlegmasia was at its worst. The patient left for home on the twenty-second day after the operation. The cyst contained a bunch of long hair and three teeth, one a perfectly-formed molar. There were also thick bony plates in the cyst wall.

The interest of the case here recorded lies in the axial rotation of the tumor, which led to obstructed circulation, with the sudden and alarming symptoms narrated. Such an accident is well known to all ovariotomists of much experience, but there is much reason to believe that the members of the general profession who are first consulted by the majority of such cases are not as keenly alive as is desirable to the possibility of such an occurrence, or to the necessity of prompt operative interference to save the life of the patient. All authorities agree that the dermoid cyst is especially liable to this accident, which, however, may occur to any ovarian cyst with sufficiently long pedicle. It would be unprofitable here to discuss the various theories as to the causes of this dangerous accident. There is still much difference of opinion on the point among those best able to form one. A prompt recognition or at least suspicion of the cause of the symptoms is much more important. These are sudden abdominal or pelvic pain, vomiting, increase of pulse, but not always of temperature, and rapid development of a tumor, or great increase in size of one previously recognized. In any case with such alarming symptoms, abdominal section must be promptly done to clear up the diagnosis and save the life of the woman, who in the great majority of the cases will die if left to nature. A good many such cases, verified by autopsy, are on record, while the records of modern abdominal surgery show that almost always the life of the woman may be saved by prompt surgical interference.

ON SOME AFFECTIONS OF THE SKIN DUE TO THE BROMIDE SALTS, WITH NOTES OF A PECULIAR CASE.

By A. D. Blackader, B.A., M.D.,
Lecturer on Diseases of Children, McGill University.

The following is the clinical history of a somewhat remarkable eruption produced by the administration of bromide of potassium :

Lizzie N , aged 15, stout and well built, of florid complexion has been for the past two and a half years under treatment for epileptic fits. The first seizure occurred during school hours, in June, 1884, and was followed by a second in October of the same year. Shortly after this second attack she commenced taking a prescription containing the mixed bromides of ammonium and potassium—in all, thirty grains a day. This was taken steadily for a period of eight months, during which she had four additional seizures. The dose was now altered to twenty grains of the potassium salt alone twice a day. This quantity was continued uninterruptedly with marked benefit; for fifteen months there was no return of the epilepsy. In September 1886, when I left for Europe, a slight acneform rash, scarcely more than a dozen papules on the forehead, was the only untoward symptom due to the constitutional effects of the remedy, and this I told the mother she might disregard. Two months afterwards, according to the mother's statement, while only a few papules were to be seen elsewhere, a cluster appeared on the back of each leg, the papules in which in a week or so began to coalesce and become inflamed, and the whole mass gradually became more raised above the surrounding skin. The mother declined to show it to any other doctor in my absence, and continued to give the medicine according to directions. On my return to Montreal in the beginning of January, I found my patient in the following condition: There was marked pallor of the face; the pupils were dilated, and complaint was made of frontal headache. When the patient was quite at rest, the pulse was weak and 68 in the minute. The mother complained that the child moped all the day, and had no inclination to work; her breath lately had acquired a decidedly unpleasant odor, her appetite was poor, and the bowels somewhat relaxed. Only a few acne papules were to be seen over the face and shoulders, but towards the back of both legs raised crustitious patches were to be seen. On the right side, about the middle third of the extensor surface, was a large patch, 12 cm. (4¾ inches) long, 8·5 cm. (3½ inches) broad, with an abrupt edge raised nearly a centimeter above the surrounding skin. Below, and coalescing with it at its upper margin, was a smaller one, nearly circular, 3 cm. (1¼ inches) in diameter, and raised similarly. On the left, four smaller patches nearly circular, 4·5 to 6 cm. (1¾ to 2⅓ inches) in diameter, and scarcely as much raised as on the other leg, occupy the posterior aspect of the limb about its middle third, while two smaller, but otherwise similar ones, adjoin a little lower down, and approach more the inner aspect. The patches had somewhat the appearance of a tubercular syphilide; their surface was covered with a thick irregular scab, on raising which a moist red surface was exposed, very sensitive, and not unlike in appearance that of exuberant granulations. For nearly half an inch surrounding these patches the skin was red and painful; otherwise general sensibility appeared to be slightly lessened. The bromide was now omitted and a mixture of iron and nux vomica administered, while lead lotion was used as a local dressing. At time of writing (two months afterwards) the patches are still slightly raised towards their lower edge, and the skin over them has a cicatricial appearance. The general condition of the girl is much improved. An epileptic attack occurred within three weeks of the discontinuance of the bromide, and was followed by a second a fortnight later. The drug was therefore recommenced in the same doses as she had been taking, with the addition of five minims of Fowler's solution to each dose. Up to date improvement continues.

The frequent occurrence of cutaneous eruptions after the prolonged administration of the bromides is well known. The exact manner in which this action is produced has been disputed, but latterly Guttman* has confirmed the fact that elimination of the drug takes place in part through the skin, by demonstrating the presence of bromine in the secretion of the pustules in a case of pustular acne occurring during the administration of potassium bromide. There can be little doubt, therefore, that in this elimination morbid changes are set up in the sebaceous glands, and that to this rather than to any trophic neurosis the majority of the eruptions are due.

Veiel,† in an interesting paper on these eruptions, states that in his experience it is impossible to foretell what size of dose may give rise to a rash. In some cases it is produced by very small doses, in others only with very large ones, while the skin of a few appear quite insusceptible to the action. The two sexes appear to be equally predisposed, and age and the general health of the patient has little influence; the eruption appearing as often in the infant as in those advanced in years; in the robust and florid as in the weak and anæmic. Discontinuance of the drug is in general followed by a rapid diminution of the rash. Very rarely has it been noticed to make its appearance only some days after the drug has been stopped, and then to persist for weeks.

By far the most common eruption is the *acneform*, which is observed more or less in about fifty per cent. of all cases treated by the bromides. A thickened skin, greasy from excessive secretion of sebum, or an integument on which there are comedones or pre-existing acne, are said to predispose to its occurrence. The locality selected is more extensive than in acne vulgaris. In addition to appearing on the face, chest and shoulders, the bromide acne shows a decided preference for parts where hairs abound. It is frequently observed in the hairy scalp, the eyebrows, and the hairy parts of the thighs and legs. It may occur even over the whole body. Sometimes it seems first to affect tissue which has been the seat of recent inflammatory action, as in the case of an infant reported by Dr. Crocker,* where the eruption appeared first on the site of a recent vaccination mark, and a similar case referred to by Dr. Barlow,† where it was first observed on the site of a recent blister, but in both cases it spread afterwards over the body. The *papular* form is the most common, but the *pustular* is of frequent occurrence. In development it resembles acne proper, but its distinguishing feature is its increase or diminution when the dose is raised or decreased.

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* Virchow's Archiv, Bd. 74, p. 540.

† Viertel Jahrcschrift f. Dermatol. und Syphilis. Vol. I. 1874.

Closely allied to the above are those cases referred to by Duhring as *confluent aud molluscoid acne.* Voisin‡ describes some as occurring in the form of oval-shaped tumors or elevations from 2 to 5 cms. in diameter, of a rose or cherry color, with indurated base, occurring exclusively on the lower extremities, and particularly on the calves of the legs. They are covered with small acneform pustules, from which cream-like contents exude, and are very painful when touched. Should the drug not be discontinued, they may become converted into foul indolent ulcers. Dr. Cholmeley has described a somewhat similar case where the eruption occurred on the face, and on the front and side of each leg.§ Veiel states that he has seen some cases of eruption in the form of wheal-like elevations on an erythematous base, very sensitive, and varying from the size of a shilling to a florin, which changed by degrees into a wart-like excrescence, and afterwards went on to ulceration. Neumann has also described a similar affection.

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* Lancet, Vol. I, 1878, p. 52.

† Lancet, Vol. I, 1878, p. 52.

‡ Bulletin Général de Therapeutique, Vol. LXXXIII, p. 241, 1867. Quoted by Lewin "Untoward Effects of Drugs," translated by J. J. Mulhern, M.D., Detroit, '83.

§ Lancet, Vol. II, p. 772, 1869.

In addition to these, Veiel describes an *erythematous* form attended by fever and great local pain. It was absolutely limited to the lower extremities, but was very diffuse over them. Bedford Brown has also described some cases of rubeola in children apparently due to the action of the bromide of potassium. Instances resembling *erythema nodosum* have also been noted. Voisin and Veiel have described slightly elevated patches of different forms, from 4 mm. to 6 cm. in diameter, of a dark-red color in the centre and lighter towards the periphery. They arise and disappear very quickly. As regards form, color and induration of base they resemble erythema nodosum, while in their reappearance after being rubbed they resemble urticaria.* The *furuncular* form of eruption is much more common than the last, and has been noted by many authors. Boils and carbuncles may form in any part of the body. Occasionally spots of acne have been observed to become true boils, and later on, should the drug not be discontinued, are converted into large ulcers with conical scabs like rupia.

In a single case the *eczematous* form has been noted. Voisin observed a weeping eczema appear on the thighs after the bromide of potassium had been administered for over a year.

Large *warts*, resembling those met with on the hands of the young, were observed in one instance by Veiel to appear on the face and legs of a boy of sixteen shortly after he commenced taking the bromide.

The leading indication in the treatment of all these rashes is the suspension of the drug. Where that is not deemed advisable, Gowers† recommends the addition of Fowler's solution, which appears to be of service at least in the prevention of the eruption. Prowse‡ strongly recommends a solution of salicylic acid in water (gr. i–℥i), and states that by this means he was enabled to heal a severe bromide rash while continuing the administration of the drug.

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* Lewin, "Untoward Effects of Drugs," Trans. Detroit, G. S. Davis, 1883, p. 121.

† Lancet, Vol. I, p. 866, 1878.

‡ British Medical Journal, Vol. II, p. 127, 1880.

The question has been asked whether any relation can be traced between the appearance of these rashes and the cessation or less frequent return of the epileptic attacks. Veiel states that there is none. Dr. Buzzard* believes that the presence of the eruption indicated beneficial effects of the remedy with respect to the original malady.

COMPARATIVE MEDICINE IN EUROPE.

A paper read before the Students' Medical Society of McGill University, February 25*th*, 1887.

By Mr. A. W. Clement, V.S.

Now that so many students find it necessary to continue their studies in some of the older countries, where from the experience of years and the munificent aid of governments the facilities are unsurpassed, I thought it might be of interest to you to hear something of the manner in which work is carried on, and of the character of the people.

My time was chiefly taken up with the veterinary school and in the pathological and bacteriological departments of the University in Berlin. The pathological institute of the University is at the Charité, the oldest and probably the largest hospital in the city. This hospital is on the opposite side of the street from the Veterinary School, so that no time need be lost in going from one to the other. Ample ground is given to these institutions in Germany, so that the surroundings are really beautiful, and those able to be about can enjoy loitering beneath the shady trees in pleasant weather in summer. The Veterinary School grounds cover about fifteen acres, with entrances from three different streets. The buildings are arranged in two quadrangles, those devoted to theoretical teaching forming the larger, while the clinical buildings form the smaller, quadrangle. The main building, facing on Louisen Strasse, is occupied as residences by the teaching staff. The physiological institute is in charge of Prof. Munk, and he certainly conducts it in a very able manner.

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* Lancet, Vol. II, p. 772, 1869.

It is here that some of the first experiments were made in removing parts of the brain in dogs, on the theory that all of the functions of the body were under control of certain centres in the brain ; he is a firm believer in the theory, and our president will remember some demonstrations in support thereof which we were allowed to witness. One dog operated upon was blind in the right eye, another in the left eye, and a third in both eyes. It certainly seems to one who is not thoroughly conversant with the matter that he has a good many facts in his favor. In the same building is the department of veterinary anatomy, while directly opposite is a fine new building devoted to human anatomy and histology, under the teaching of Waldeyer, one of the best, if not the best histologist living. This department belongs to the University, but is open to veterinary students on payment of a small fee. A splendid new building at the end of the quadrangle, opposite the main entrance, is the pathological institute for the Veterinary School ; it is considerably larger than the Peter Redpath museum, and is most thoroughly equipped. A part of the raised basement is devoted to the preparation of specimens for the museum, and at one end a large room for making autopsies extends from the ground to the floor of the second story. This room has every possible convenience, and is even luxuriously fitted up ; the floor is tiled and well drained. There is plenty of water, light and ventilation. The walls are tinted and the ceiling nicely frescoed. Adjoining this room, and connected with it by folding-doors, is the demonstrating room ; the larger animals are mounted on trucks and wheeled into this room for demonstrations in making post-mortems three times a week. Seats are arranged in this room so that all of the students not engaged in making the autopsy can see perfectly all that is going on. The remainder of the first floor is devoted to private laboratories for the professor and his assistants, a bacteriological laboratory, and a large hall for microscopical demonstrations. Nearly the whole of the second story is devoted to a pathological museum. Some of the specimens are fifty years old, and many are rare and very interesting and instructive. Some very good work has been done at this institute, and Prof. Schutz, who is in charge at present, is keeping up its good reputation: he has just finished some original work on infectious pneumonia in horses; he claims to have isolated and cultivated a micro-organism which, when inoculated into the tissues of healthy horses, produces a disease corresponding in symptoms and post-mortem lesions with that seen in the clinics. Three horses inoculated subcutaneously developed the disease after a stage of incubation of from three to four days. Inhalations in a fourth horse failed to have any effect. Professor Schutz was one of the first to recognize the glanders bacillus, and in company with Löfler, originated the present method of staining them.

There is a large amount of material available at this institute. During the six months that I was there we had one hundred and fifty post-mortems on horses; and I would not pretend to say how many on the smaller animals. Probably ten or twelve small animals are sent there every day, but they are not all utilized. In addition to this, the organs of many animals dying from contagious diseases are sent for diagnosis.

The clinics are very large, and are divided into four sections: the medical, surgical and polyclinic for the larger animals, and the smaller animals clinic. There are on an average about two hundred and fifty horses as resident patients, and from thirty to fifty daily in the polyclinic. All sorts of operations are performed, and the material is well utilized for teaching. A feature of the medical clinic is the fine laboratories connected with it for microscopical and chemical analysis of urine, etc. In the smaller animals clinic are about seventy-five resident patients, mostly dogs, and from thirty to forty out-patients daily.

The pathological institute at the Charité, under Prof. Virchow, is so well known that very little need be said of it. The building itself does not compare with the veterinary pathological institute either in appearance externally or in arrangements internally. There is a large amount of material, however, and the teaching is good. Prof. Virchow is a very unpretending gentleman, and is so full of enthusiasm in his work that he at once wins the respect and admiration of his pupils. He never seems to exhaust his subject, and perhaps his demonstrations are so long as to make them a little tiresome, lasting, as they often do, from half-past seven until nearly noon! They are very interesting, however, and, it is needless to say, instructive.

Bacteriology does not form any considerable part of the work done at the Charité. They do not object to it, but, on the other hand, they do not enthuse much over it. Koch's laboratory is supposed to be the place of places to study this branch of medicine, and in many respects it is the best place; if, however, they would look after the interest of their students a little more it would be better. Last August, for example, during Prof. Koch's absence from the city, the assistant in charge admitted twenty-six men to work in a laboratory intended to accommodate fourteen, and in which a larger number could not work with comfort; the consequence was that very many of the cultures were impure, and there was general dissatisfaction. It is a good place to study methods, however, and that is probably what most of us are after if we are to remain in the country but a short time.

Another most interesting and instructive place to one who has any taste for pathological work is the "viehof," or central slaughter-house. Nearly all of the meat eaten in Berlin is slaughtered at this place, and the inspection service is so well organized that nothing escapes detection. There are altogether about 152 persons connected with this department. There are 26 qualified veterinary surgeons and about the same number of assistants. Then there are 100 trained microscopists, mostly women, who examine the tissues brought to them. In addition to these, there is a comparative pathologist, to whom all doubtful points are referred, and the veterinary superintendent, who has charge of the whole department.

Any quantity of material is to be found here, and in the pathological laboratory some excellent work is done. Inoculations with tuberculous matter and with animal parasites are carried on here. Acitnonyces in hogs were first found by Dunker, the pathologist to this establishment. Probably there is no place in the world better adapted for studying parasites, and all animals harboring the larvæ of parasites, which in their adult stage may develop in man, are consigned to the vat. The flesh of all animals suffering from any disease communicable or supposed to be communicable to man is confiscated. It is needless to say that the other departments are conducted equally well. Perfect cleanliness is required, and there is no confusion. The butchers have separate stalls of their own, and do their own killing, subject only to the general regulations.

I do not know very much about the hospital advantages for students of human medicine, but from what I could learn from my medical friends who were there at the time, and from the manner in which things are generally done in Berlin, I should say that they were unsurpassed.

So far as the cost of living in Berlin is concerned, if we can live as the German students live, it cannot be much. Few of us, however, would be willing to make our breakfast off cold sausage, dry bread and stale coffee ; a dinner of mixed food, supplemented by a quart of beer ; and a supper the same as breakfast. This, however, is the way in which all the students lived with whom I was acquainted, and they did good work on it, too. English-speaking people often try it, but they generally give it up in a short time, and to live as we are in the habit of living costs money there. I should say that from $35 to $40 per month was little enough to pay for comfortable lodgings and board in Berlin. Fees are low.

London, so far as veterinary education, and as near as I can learn with regard to human medicine, is not to be compared with Berlin, except from the important fact that one's native language is spoken.

On arriving in Paris it happened to be my good fortune to meet M. Pasteur in his laboratory. He is a very pleasant gentleman, of medium stature, and looking older than I believe he really is. This is probably due, to a great extent, to his hemiplegic condition. His laboratory is a very unpretentious affair, consisting of a long one-story building with numerous small, dark rooms, while in the cellar he keeps his menagerie of wild animals, or if not wild, at least mad. Rabbits and guineapigs form the bulk of his stock-in-trade. There are no dogs. His method of inoculation is very simple, consisting, as you are probably aware, of the injection of a small piece of medulla of a rabbit, macerated in beef broth, into the sub-meningeal space of a healthy animal. As soon as the inoculated animal dies, the medulla and about two inches of the cord are suspended in a glass vessel which has been previously sterilized, and in the bottom of which, to the height of about one inch, broken pieces of caustic potash have been placed. This cord is allowed to stand a certain length of time, varying according to the virulency which it is wished to obtain, those one day old being considered twelve times as virulent as those twelve days old. Human patients are treated by injections made in precisely the same manner as that used for inoculating rabbits, in which check inoculation experiments are carried out. Human beings are inoculated hypodermically, alternately in the right and left umbilical regions. A great many people present themselves for treatment, and, without doubt, very many of them have never been exposed to the virus of rabies; but, on the other hand, some have been bitten by dogs which, so far as could be judged from symptoms and post-mortem appearances, were rabid. I remember one case in particular, where a policeman was bitten in the hand by a dog supposed to be mad. The dog was sent to the veterinary school at Alfort, and a post-mortem examination was made by Professor Nocard, an authority on the subject, who unhesitatingly pronounced the dog rabid. The policeman went to Pasteur's laboratory, where he was treated, and when I left he had developed no symptoms of hydrophobia.

They do not pretend in Paris that the treatment is curative when once the symptoms of hydrophobia have developed. It is simply preventive. That it is preventive they most conscientiously believe in Pasteur's laboratory. Many, however, do not believe it is even preventive, and that those who have escaped the evil results of the bite would have escaped had they never seen nor heard of Pasteur or his treatment. Perhaps one of the strongest opponents of the system is M. Colin, of the Alfort Veterinary School. He says in plain terms that Pasteur has killed more than he had cured; that the great majority of the human race are insusceptible to the action of the virus, and that ordinary precaution renders the action of the virus nil on most of those who are susceptible. He has proved, he says, "that the poison is very slightly soluble in water, blood or serum, and that, consequently, the application of the cautery even two or three hours after the bite has been inflicted acts as a specific by destroying the virus."

I had an opportunity of studying the disease clinically at the Alfort Veterinary School in seven or eight cases. The symptoms vary so much, and the post-mortem appearances are so little characteristic that I do not believe a veterinary surgeon would be warranted in giving a certificate that an animal died of rabies unless he could produce the disease in another animal by inoculation. It may here be said that the law in England is such that he must have a license to inoculate, and before he could get that the patient might die of hydrophobia. It is high time the anti-vivisection laws in that country were repealed or at least modified.

Rabies in the dog may occur in two forms, known as furious rabies and as dumb rabies. The one form often merges into the other, however. That there is a specific disease called rabies is beyond all doubt, though it is often very difficult to diagnose. The first symptoms are dullness, bad temper, loss of appetite, etc. There is generally a peculiar expression about the eye very difficult to describe, but never to be forgotten when once seen. It is a wild stare, the eye-balls are very prominent, and the animal seems frightened. Clonic spasms soon come on and they are accompanied by a peculiar high-pitched howl. The mucous membranes highly injected. There is seldom any frothing at the mouth, but sometimes shreds of mucus may be seen hanging from the jaw. Soon the lower jaw becomes paralyzed, and drops. Paraplegia comes on gradually, and the animal dies. They will not eat food, as a rule, but will swallow all sorts of indigestible substances, such as bits of rags, leather, etc. After voiding their urine they will invariably turn about and lick it up, and they will often eat their fæces. It is a mistake to think that dogs are always inclined to bite when rabid; very often they will snap at everything in their way, but I have seen them when furious refuse to bite at a stick even though it was thrust into their mouths.

As I said before, the post-mortem changes are neither prominent nor constant. There is generally intense hyperæmia of the mucous membrane of the stomach and sometimes of the whole intestinal tract. The pia and dura maters are generally engorged. Oftentimes the stomach is filled with foreign matter, while there is no food present. The presence of this foreign matter in the stomach, together with the absence of food, the hyperæmia of the stomach and of the meninges, taken in connection with the clinical history, is considered sufficient evidence upon which to form a diagnosis. Of course if the disease can be reproduced, there can be no doubt as to its nature.

M. Pasteur's rabbits do not have rabies in its furious form. Progressive paralysis, beginning after a definite stage of incubation and ending fatally, is the only diagnostic symptom ; hence it is that many have denied that these animals had rabies at all. One thing is sure, however. These animals suffer from a disease accompanied by constant symptoms, and inoculable from one animal to another ; and that inoculations from a rabid dog produces a disease the symptoms of which are identical with those presented by M. Pasteur's experimental animals. Moreover, if statistics can be relied upon, the number of deaths from hydrophobia in the Paris hospitals have greatly decrecsed in the past three years, or since preventive inoculation has been practised. We are led to believe, therefore, that however far from perfection his methods may be, he is on the right track, and we most certainly hope that success may crown his efforts, and that his remedy may be made not only preventive, but curative.

NON-HEREDITY OF ACQUIRED PECULIARITIES.

By W. G. Johnston, M.D.,
Demonstrator of Pathology, McGill University.

(Read before the Medico-Chirurgical Society of Montreal.)

My excuse for bringing before the Society a paper in which I have nothing original to offer lies in the great interest attaching to the question of heredity and in the hope of starting an interesting discussion.

Most physicians think it probable that peculiarities acquired during the lifetime of an individual can be transmitted by him to his descendants. Indeed this view is so generally held, that a great deal of surprise was caused by Prof. Weismann of Jena when in 1885* he stated that in his opinion it was no longer tenable. Excluding those cases where an infectious disease of the parent is directly transmitted to the fœtus in utero, as happens in the case of smallpox and perhaps in syphilis, there are a number of facts recorded which seem to show an apparent heredity of acquired peculiarities. On closer examination, however, these observations are anything but convincing, the majority depend to some extent upon hearsay evidence, while no single one is absolutely conclusive in itself. The mass of facts really seems more confusing than useful. I will merely mention the most marked instance I have seen recorded. Prof. Bouchut mentions the case of a man who was through accident, at the age of 25, crippled in both hands and feet; his son, born some years afterwards, had only one finger on each hand and two toes on each foot. This son had five children, of whom four showed the deformity. A daughtor of the original patient marrying a healthy man had four children, three of whom showed the deformity. The objection to this case is that the history of preceding generations could not be obtained.

In another series of cases, the acquired power of transmitting peculiarities is supposed to arise, not suddenly, but gradually in the course of many generations, as seen in the case of European families becoming acclimatized in tropical countries. This seems more probable, but the difficulty of criticizing the evidence becomes insurmountable, and the question remains open whether the persons become acclimatized because an acquired power of resisting the ill effects of the climate is transmitted to them, or whether a spontaneously inherited power in the survivors enables them better to resist the climate.

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* Naturforscher Versammlung, Strassburg.

Heredity of Polydactylism is, of course, outside the question, as this is not an acquired peculiarity.

With reference to one instance adduced by Blumenbach, and quoted by Darwin, namely, that the practice of circumcision through many generations is responsible for the fact that many Jewish infants are born in Germany with defective foreskins, Virchow, though himself a strong opponent of Weismann's views, feels constrained to remark* that many little Christians "are also born in Germany with defective foreskins, but in the cases examined by him this abnormality was always found in combination with some defect in the urethra—a part not involved in circumcision—and yet circumcision has now been practised several thousand years."

In J. B. Sutton's recent papers upon "Pathology in Evolution,"† the conclusion that permanent peculiarities arise out of conditions which were pathological in some remote ancestor do not seem, although plausible, to be impartially drawn, and the possible objections thereto are not considered at all.

Prof. Weismann, in advancing his views, has endeavored to put the whole matter upon a different basis. He considers it now established through the recent researches upon the nature of nuclei that the nucleus is the only part of a cell which is concerned in reproduction, and therefore in questions of heredity. The protoplasm, on the other hand, regulates all relations of the cell with its external surroundings, and that these external conditions can in no way so influence the nucleus so as to cause their effects to be transmitted to succeeding generations.

Embryological studies on ecchinoderms show that the spermatozoa and germinal area are modified cells, the male and female pro-nuclei corresponding in all respects to nuclear substance, and showing on impregnation typical nuclear (karyokinetic) figures. Weismann argues that if what is true of cells be true of individuals, then no external influences can so modify those parts which are concerned in heredity as to cause any acquired changes of the body-*protoplasm* to be transmitted by the pro-nuclei-*nucleus*. After the moment of impregnation the cycle of heredity is complete.

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* Decendenz u Pathologie, Virchow's Archiv, B. CIII, s. 213.

† Erasmus Wilson, Lectures on Pathology, 1885.

Whether his contention be sustained or not, he certainly presents the question in a simple and comprehensible light. It is certainly easier to grasp the idea of heredity or non-heredity, as depending upon whether nucleus or merely protoplasm be involved by the peculiarity under consideration.

The views previously advanced as to the physical basis of heredity were far less clear. Darwin's theory of pangenesis assumed that infinitely small particles throughout the body entering, or even becoming, cells regulated heredity.

Haeckel held views somewhat similar, but considered the essential element to be a peculiarity of molecular *motion* rather than of substance. Either view is, to put it mildly, rather difficult for an ordinary mind to grasp.

The theory of W. K. Brooks of Johns-Hopkins differs from that of Weismann in that he considers that any cell of an organism may possibly affect any other cell in modifying heredity.

Weismann's views necessitates a different interpretation of the influences at work in natural selection, adaptation assuming a very secondary place, and sexual selection being correspondingly exalted.

It must be acknowledged that this non-transmission theory is in accordance with the experiments of Knight and others who have endeavored, by altering the external surroundings, to produce a permanent species, these experiments having signally failed. Probably few will be prepared to accept so sweeping a hypothesis to the full extent of its significance ; still it may lead to a more careful recording of cases with a view to settling this point.

Prof. Ziegler, who is a convert to, and moderate supporter of, Weismann's views, has recently written an able article on the whole question. He still considers it possible that in the course of a long series of generations a continuously acting cause may produce permanence of some of its effects.

Correspondence.

BERLIN, March 7th, 1887.

The attractions of Berlin for the study of gynæcoloy, pathology and other special departments are probably pretty well known in Canada, but the advantages for general study are, perhaps, less known and appreciated. It may, perhaps, prove of some interest to send a few lines describing in general terms some of the medical work here.

The different clinics are spread over the day from eight A.M. till evening, and are so arranged as to suit the convenience of the students, who derive their instruction almost entirely in this practical method.

The Charité, with its 1200 patients, is the chief hospital, and here many of the university professors can be heard daily. The leading medical clinics are given by Leyden and Gerhardt, and are usually largely attended. Henoch, also, has a very interesting clinic on children's diseases, a subject on which he is a recognized authority, and on which the third edition of his book has just appeared. The general plan adopted by these teachers is to take up one or two cases in the hour or hour and a half which they occupy, and discuss each point of interest in it. Gerhardt seems a particularly painstaking and careful teacher, and the careful way in which he examines all the different organs, marking out the various percussion areas, etc., is well calculated to impress his listeners with the necessity of using the greatest caution before coming to a conclusion. Some of the smaller clinics are, perhaps, more instructive, inasmuch as there is in these a better chance for personally examining patients, and any one staying some time in Berlin would do well to attend these.

At the Augusta Hospital there are some excellent clinics, although a much smaller amount of material.

In addition to the before-mentioned, all the subjects embraced in a student's curriculum are taught in a similar manner, so that in a few months any one having a fair knowledge of the language can readily become acquainted with the various methods employed in the diagnosis and treatment of disease.

By Schröder's death the Berlin faculty has lost one of its best known members. Beyond the closing of the Frauen Klinik for a week, little or no notice was taken of the event in the other clinics, and the funeral, which was largely attended by the students in the dress worn at some of their gatherings, consisting largely of bright colors modified by a dash of crape, gave the whole affair a very holiday look.

Some of the new antipyretics, especially antipyrine, are pretty largely used in high temperatures in typhoid and other fevers, provided the pulse be good, also as a substitute for salicylates in acute rheumatism. The treatment of fever by cold baths has now been abandoned by Senator, Leyden and others, although Brand, in a recent paper in *Deut. Med. Woch.*, advocates them as strongly as ever. He complains that the opponents of the cold bath system have not carried them out thoroughly—*i.e.*, "remove or prevent any exacerbation of fever, during the whole course of the disease, by a bath at 60°F. every three hours if the temperature rise over 102°." He claims that the mortality is in this way greatly diminished, that complications are seldom met with, and that the danger of collapse is far less than by any other method. In a table comparing a number of cases treated, under similar conditions, by cold-water baths and by an inefficient cold-water system combined with antipyretics, the latter method is shown to have at least a double mortality. It would seem as if the whole question is to be opened up again, and the discussion which will doubtless be provoked will prove of interest.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

TWO CASES OF TETANUS.

UNDER DR. SHEPHERD.

CASE I.—Reported by DR. H. S. BIRKETT, House Surgeon.

W. M., aged 21, was admitted July 23rd, 1886, with severe injury of thumb and forefinger of left hand, received a week previous whilst coupling cars.

Condition on entrance.—Patient strong, healthy young man. Thumb much swollen ; soft parts about phalanges bruised and lacerated, very painful, and tender ; no fracture. The wounds of soft parts lead down to the bone. From tip of index finger to middle of first phalanx the tissues are in a gangrenous condition, dark-colored, cold, insensitive and emphysematous ; smell from finger very fœtid. Line of demarkation seen at middle of first phalanx.

July 24th.—Patient etherized; index finger amputated by the house surgeon at the metacarpo-phalangeal joint. Thumb well incised. Dressed with iodoform gauze, jute and splint.

July 25th.—Slept fairly well. Pain in hand ; no discharge. Dressed ; considerable pain, redness, tenderness and swelling over stump. Took out suture and expressed ℨiv bloody pus ; syringed ; dry dressing. Temperature 100°. To be dressed daily.

July 26th.—Wound looks fairly well, but there is an inflammatory blush; pain, tenderness and discharge lessened. Syringed. Dry dressing. Temperature 99°. Complains very much of stiffness about lower jaw ; inability to open mouth ; pain in throat whilst swallowing. Slight "risus sardonicus."

July 27th.—Stiffness about jaw very marked, so that patient unable to open mouth at all. Risus sardonicus more marked. Dysphagia more apparent. Pain and stiffness in muscles of back of neck. Eyes natural in appearance. Has profuse sweating ; no abdominal pains ; muscles of abdomen very hard and rigid ; no muscular twitchings. Temperature 100° ; pulse 40, full and regular; respiration is regular and unembarrassed. Ordered enema, which acted well. Removed to room by himself; perfect rest and quietness to be obtained. ℞ ʒss chloral hydr. potass. bromidi gr. xx, 4 q.h. No difficulty in micturating.

July 28th.—Stiffness about jaw lessened; swallows more freely. Abdominal muscles less rigid. Wound dressed; small amount of pus · less pain. Temperature 101°; pulse 90; respirations 20. Urine 42 ounces; specific gravity 1030.

July 29th.—General conditions much the same as yesterday. Temperature 98° to 99°.

July 30th.—Patient very restless, tossing about; draws legs up; throws arms about and cries out occasionally. Wound dressed; very small amount of pus; looks healthy. Thumb much less swollen, and looks very well. Temperature 98–99°. Urine 42 ounces; specific gravity 1030, very alkaline; heavy deposit of phosphates, no sugar or albumen. Sweats profusely. Pulse 80–90, and of full volume. Tetanic condition unchanged. Takes food pretty well.

July 31st.—Still very restless. Rigidity of muscles of neck and abdomen very marked. Sweats still continue. Incontinence of urine. When sleeping, muscular rigidity not well marked. Does not swallow so well. Pulse 120; temperature 103½°.

Aug. 1st.—Patient continues to sink gradually. Spasmodic contractions not so well marked. Mouth dry. Unable to swallow. Unconscious. Pulse 160; respirations 34. Temperature rose gradually, reaching 106.5° just at death, which took place at 6 p.m.

CASE II.—Reported by DR. D. CORSAN, House Surgeon.

R. G., aged 16, stable-boy, admitted Sept. 18th, 1886, being brought to hospital in a tetanic condition. On the 13th of September a rusty nail penetrated his shoe and merely scraped the skin. In a short time his foot became very painful and considerably swollen. Had it poulticed for a few hours, with relief to both pain and swelling. On the evening of the 17th, the night previous to admission, first noticed a stiffness about the muscles of back of neck and in muscles of the jaw.

On admission (11 a.m.), the risus sardonicus was plainly seen;

head slightly drawn back, muscular twitchings, and abdomen rigid. Complained of pain in back of neck and abdomen. Swallowed liquid nourishment with some difficulty. Dorsal decubitus with considerable arching from occiput to the hips. At 1 p.m. all previous symptoms were intensified; swallowed with much greater difficulty and pain; the left foot was slightly swollen, and about two inches behind web of large toe was a small black mark, the spot where the injury was received; did not appear to penetrate beyond the epidermis. Nothing else noticeable about the foot.

Dr. Shepherd decided to cut down and excise parts about the point of injury. Patient was etherized and an elliptical incision made around the wound. A small abscess was found in deep skin layer, which had no apparent connection with the external wound. Going deeper, another small abscess about the size of a pea was found, just over the tendon of the flexor longus hallucis. Still deeper, found an abscess under the tendon of the flexor brevis, directly over the metatarso-phalangeal joint. No connection could be found between any of these abscesses. There was considerable inflammatory thickening in all the tissues, and the tendons had a greenish hue. The operation wound was stuffed with iodoform gauze and bandaged. At 4 p.m., patient recovered from the effects of the anæsthetic; breathing labored and chiefly abdominal; risus sardonicus very marked; tetanic spasms more severe than before; temperature 99°; pulse 100. At 5 p.m., patient became much worse; spasms very severe, and came on with greater frequency than before; opisthotonos marked; could not swallow at all; ordered morphia sulph. gr. ¼ hypodermically. Temperature 100°; pulse 120. At 6 p.m., temperature 103°; pulse 150. At 7 p.m., temperature 105°; pulse 160; morph. sulph. gr. ⅜ hypodermically. At 8 p.m., temperature 106°. Patient died shortly after eight o'clock; temperature half an hour after death, 107.5°.

Remarks.—Tetanus is a disease which has not been at all influenced by the introduction of antiseptics. In the first case the wound was in a very fœtid condition, and it has been noticed that tetanus not uncommonly exists in those cases of crushing injuries where decomposition has taken place in the wound. The first case illustrates this cause of tetanus. According to M. Gauthier, certain chemical changes, the result of decomposition, take place and the products are certain animal alkaloids or leucomaines which produce such irritation upon the peripheral nerves that the condition we call tetanus is produced. The second case is an example of how slight an injury may be followed by tetanus. In this case no doubt the affection was produced by irritation of the terminal nerve filaments. Although the excision was performed at a comparatively early stage of the disease, no good result followed.

MONTREAL DISPENSARY—DEPARTMENT OF GYNÆCOLOGY.

CASES UNDER THE CARE OF DR. ALLOWAY.

CASE I.—*Stenosis of Cervix Uteri treated by divulsion and division of posterior segment.*

M. S., aged 29, married two years, no pregnancy. Menstruation occurs every fourth week, but is accompanied with such severe pelvic pain that she is compelled to remain in bed during the whole period. During the intermenstrual period she is tolerably well and free from pain; there is, however, some leucorrhœal discharge.

Examination.—External parts normal; vagina small; cervix elongated and hypertrophied; the anterior segment of cervix abnormally short; os uteri small and its lips eroded and cicatricial, discharging a glairy mucus; cervix looks down the vagina and somewhat backwards; fundus anteflexed, resting over on the bladder; there is extreme tenderness in the fornices; uterus moveable. By the use of the glycerine tamponade for two months the tenderness gradually disappeared. She was now put to bed for three weeks on hot-water injections, at end of which time the following operation was performed:

The patient, under ether, was placed in the dorsal position, the vagina irrigated with sublimate solution, uterus drawn forward with volsella, and Sims' glove-stick dilator introduced. With this instrument the cervix was gradually stretched to a certain point, a stream of sublimate solution being kept playing into the uterus between the bars of the dilator. The heavy Goodell's instrument was then introduced and the cervix gradually dilated to the full extent of one inch. The knife (*Fig.* 1)

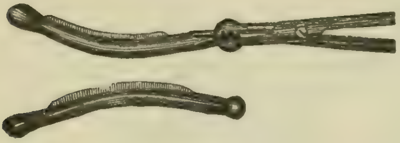

Fig. 1.

was then introduced and the anterior tense wall incised until the tension was relieved on the dilator. The instruments were now withdrawn, the patient turned on her left side, and the posterior segment of cervix slit up in the median line with a straight scissors as far as the vaginal junction. A triangular piece is completely excised from each flap, the base being at the os, the apex ending at the apex of the median incision. The mucous membrane of the cervical canal is now stitched to that covering the portio-vaginalis, as shown in Figure 2. By this method it is impossible for the incision to granulate downwards, which was the great difficulty Sims had to deal with in his method of dividing the posterior cervix and allowing it to heal by granulation.

It would appear at first thought that this procedure was simply creating a laceration of the posterior cervical segment, and that it would remain so as a deformity. This, however, is not the case, and it is due to the different states of the tissues involved in the puerpera and non-puerpera. The change which takes place within the first month following the operation consists in a shrinking of the anterior segment and a general atrophy of the whole intravaginal cervix until it appears as represented in Figure 3. The sound now passes directly forwards into the cavity of the uterus, and the os opens directly into the posterior vaginal pouch and semenal pool.

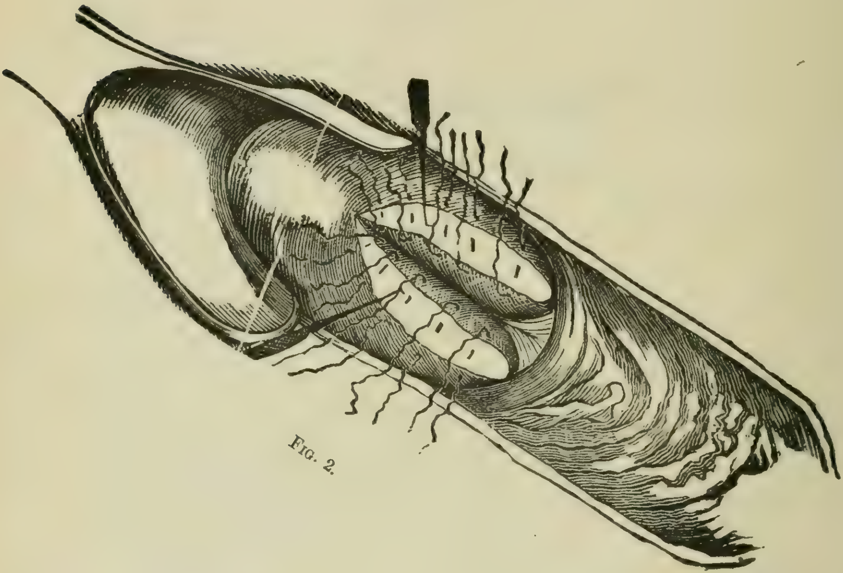

FIG. 2.

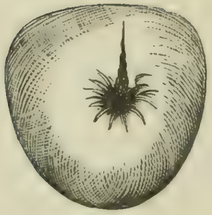

FIG. 3.

The knife represented is one made for me by Mr. Ford of New York. It has the exact curve of the blades of the Goodell dilator, and being a small blade set in a steel probe, can cut only to the depth of the blade, which is, I think, an advantage over Sims' original metrotome knife.

CASE II.—*Stenosis of Cervix Uteri treated by divulsion and division of posterior segment.*

M. C., aged 30, married seven years ; never been pregnant. Menstruation every fourth week, but suffers very severe pain just before and during the flow in utero-ovarian region and back. Has leucorrhœal discharge and irritability of bladder.

Examination.—Perineum extremely rigid, causing difficulty in making satisfactory examination. Vagina small. Much tenderness and rigidity of pelvic floor. Cicatricial contraction of base of right broad ligament, drawing cervix to that side and backwards and fundus forwards on bladder. Intra-vaginal cervix elongated and hypertrophied as in *Case I*, but the lips around os were not eroded. Uterus in depth $+\frac{1}{2}$ inch.

This patient was also placed under the glycerine tamponade treatment for ten weeks, which completely relieved the tenderness and tension of pelvic floor. And after two weeks confinement to bed on hot-water douches, rapid dilatation with incision was practised.

The material for sutures best adapted for these cases is, I think, Chinese silk. An antiseptic vaginal irrigation night and morning is used and the sutures removed on the eighth or tenth day. The best time to do the operation is midway between the menstrual periods, and the patient should be confined to bed until the following period has passed over. For the two months following the operation there is in some cases rather profuse menstruation, but should be positively without pain in the pelvic region. After this the periods gradually become less profuse until a normal condition is established. In my experience I have not seen the slightest disturbance of pulse or temperature, nor complaint of pain follow this operation.

CASE III.—*Impending death from Uterine Hemorrhage following abortion at ninth week; curette and forceps used; recovery.*

The following case is the second I have seen where life seemed almost extinct from hemorrhage following death of the ovum and partial separation of decidua. I found the patient—a miserably delicate and emaciated chronic invalid from uterine disease—lying in a bed saturated with blood, her friends about her expecting death soon to close the scene. She was 27 years of age, had had two children at full term, and several miscarriages at two and a half months gestation. Two days before I saw her she began to flow, which continued irregularly up to that morning. She had been losing very freely all day until she had reached the exhausted state I now found her in. There was no pulse at either wrist. Heart-sounds feeble and slow; impulse in carotids faintly evident to touch. Special senses almost obliterated. Corneal reflex slow to respond. She could just answer " Yes " or " No " in a faint whisper. Extremities were becoming cold, and, in fact, she had all the appearance of a woman dying. I began administering hypodermics of brandy as rapidly as possible until she had received about half an ounce. This did not seem to improve her condition very much, so I placed her on her side and began removing with the forceps masses of decidua from the uterus as rapidly as possible. This part completed, I irrigated the uterus with a very hot sublimate solution, after which I began administering hypodermics of brandy until she had received nearly an ounce. She was then placed on her back, with her head lowered, and hot bottles placed all round her. In an hour's time I left her quite pulseless and in much the same condition as I found her, the heart-beat still having the same slow rhythm. Her friends had orders to feed her by the rectum, and when she could swallow, to give her a teaspoonful at a time of beef-tea.

As this woman lived some six miles from town, I did not see her again until the fifth day following, though I had had communication with her husband by telephone each day, which simply told me she was alive and slightly improving, and that practically she had not lost but a few drops of blood since the operation. Five days after the operation I found her much improved. She had a radial pulse, could converse with me, and was able to take nourishment. She gradually improved, but even now (two months since the operation) she is scarcely able to sit up for any length of time. I may say that this patient had a badly retroflexed uterus, which was in all probability the cause of the abortion.

The other almost fatal case, of a similar nature from hemorrhage, which has been alluded to is taken from the Proceedings of the Montreal Medico-Chirurgical Society, 1883, page 36, and is as follows:—

"Dr. Alloway exhibited a small piece of decidua, about one inch square. The history of the case from which he had removed the specimen with the dull curette was as follows: Patient, about 40 years of age, mother of twelve children, had been losing blood from the vagina for several days; had been taking medicine from a physician, and had had her vaginal passage plugged daily to arrest hemorrhage. She was found by Dr. A. in a dying condition; no pulse at wrist, surface completely blanched, and extremities cold. Could not obtain an answer to questions. Heart's action could be heard very faintly through chest walls. She had received the last rites of the church, and was, in fact, dying. Removed all the cloths and packing in vagina; felt a fringe-like substance high up above the internal os, but could not reach further with finger. Passed up curette and detached the piece of decidua, and withdrew it with forceps. Washed out uterus with antiseptic solution. Patient could not swallow. Administered hypodermic of ether. Ordered beef-tea egg and brandy by rectal injection every two hours; heat to extremities and body generally. Patient improved by the morning, and gradually recovered life, but remains bloodless as when first seen, three weeks ago. Dr. Alloway said he adduced the case to show the great danger of following out rigidly the expectant plan of treatment in such cases. Efforts had evidently been made to remove the secundines with the finger, leaving behind the small portion exhibited which was causing the hemorrhage.

Those who opposed the curette were physicians who had never used the instrument, and had not convinced themselves of its perfect harmlessness and great value."

CASE IV.—*Curetting the Uterine cavity in a case of Puerperal Septicæmia occurring fourth day after delivery; rapid recovery.*

This was an interesting case in view of recent researches being carried out in Germany in the treatment of puerperal sepsis.

The patient was a young French-Canadian, aged 24, her second confinement. On the fourth day following labor she complained of not feeling well. She had a headache; her left breast was inflamed, tender, and contained indurations close to the axilla. Her temperature was 101°; pulse 116. No tenderness whatever in pelvic region. Uterus small and firmly contracted, resting down in the well of the pelvis. Discharge scanty and not fœtid. This was the condition in which I found her. She was attended by a nurse on the end of whose second finger of the right hand I noticed a large, ugly-looking, inflammatory, bulbous swelling. On examining this finger I found it was an onychia in the stage of recovery, with the nail dropping off. She was a feeble old woman, and assured me the patient's slight deviation from health was due to the inflamed breast, which with some rubbing would set everything right. I had nothing with me to make an examination at this time, so left instructions that if she became worse to inform me of it. Next morning I found she had had several severe rigors after I had seen her the previous day, which were attributed to cold in the breast by the attendants. Her temperature was now 102.5°; pulse 120. No pain nor tenderness over uterus or broad ligaments. On placing her across the bed in Sims' position, I found the rima vulvæ filled with a plug of fœtid, greyish, mucoid mass. This removed, the speculum revealed a badly lacerated cervix bilaterally, bathed in the same greyish mucoid matter. I passed Jannison's irrigating tube to the fundus, and used a gallon of hot sublimate solution (1–4000), which at first brought away a return fluid of a purulent character, but eventually became quite clear. After irrigating the uterine cavity in this manner, I thought I would investigate the matter further with the curette and forceps. I passed the long polypus forceps carefully to the fundus and began a series of nipping and drawing with the instrument upon the walls of the uterus until I had covered what I judged would be the whole intra-uterine surface. Suddenly on withdrawing the forceps it was accompanied with the expulsion of a large mass of this peculiar-looking, stringy, greyish matter. This proved to be on examination as having the appearance of broken down membrane mixed with mucous. I now introduced the small dull curette and thoroughly, but very gently, scraped the entire cavity-walls of the uterus, but obtained very little more of this detritus. The uterus was again irrigated with another gallon of very hot sublimate solution, and forty grains each of iodoform and boric acid introduced in the form of suppositories. Next morning, temperature 99°F., pulse 100, and all evidence of febrile disturbance and breast trouble absent. Uterus again irrigated with sublimate solution as before, and forty grains of iodoform and boric acid introduced. On the third day she felt quite well. Uterus again irrigated, but with carbolic acid solution 1–40; iodoform suppositories as before. Patient left her bed on the tenth day after labor, and did not look any the worse for what she had gone through.

In this case I used the same instruments as in curetting the aborting uterus, introduced for that purpose some eight years ago. It is difficult, however, to say what the future of this method will be, as it is a difficult operation to perform, much more so than the one on the aborting uterus. The procedure, however, is sound in principle. The uterus in every case of rise of temperature such as I have described should be explored and a correct diagnosis arrived at; it is the only way in which we can expect to obtain success. It seemed to me, during the operation, that the placental site, or what appeared to be that part of the uterine wall, was one mass of pulpy coating, which if not treated with great delicacy of touch and judgment, large vessels would be opened and irretrievable damage done. In the case of curetting the aborting uterus at, say, the ninth or tenth week, comparatively speaking the procedure is plain-sailing; harm can only come from leaving portions of the decidua behind through want of a thoroughness in the use of the instruments. I think in these puerperal cases the iodoform and boric acid suppositories are most excellent and necessary accessory aids in the treatment. The occurrence of the breast trouble in this case strongly substantiates the views of Ogston[*] regarding the bacterial origin of acute puerperal mastitis. The glandular affection of the left mamma began with the absorption of septic matter from the uterus, and subsided simultaneously with the defervescence of the septic fever on the uterine cavity being rendered aseptic.[†]

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, Jan. 14th, 1887.

J. C. CAMERON, M.D., PRESIDENT, IN THE CHAIR.

Bromide Rash.—DR. BLACKADER exhibited a typical case of bromide acne, and gave the history of the case. (*See page* 515.)

DR. STEWART asked if bromide of potassium had been administered alone, and suggested the practice of combining Fowler's solution to prevent bromide or iodide acne.

DR. BLACKADER replied that he usually administered a combination of the bromides of potassium with sodium or potassium and ammonium, but had forgotten the exact prescription. The dose was about 40 grains daily.

Wound of the Internal Jugular.—DR. BELL exhibited a patient who had recently met with an accident resulting in severance of the internal jugular vein. The patient was convalescent. (A full report of the case appeared in the March issue of the JOURNAL.)

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[*] Ogston, Micrococcus Poisoning—Journal of Anatomy and Physiology.

[†] While reading the proofs of the above report I was asked to see this patient on account of her breast. I found that the intensity of the inflammation had to a certain degree abated, but had gradually again progressed. Slight evidence of deep fluctuation could now be obtained, the skin on axillary side was reddened. I forced a long-curved bistoury to the centre of the gland, and found pus in considerable quantity. Convalescence very little interfered with.

Dr. Shepherd thought that the laryngeal trouble might be due to division of the superior laryngeal nerve, with, perhaps, some fibres of the inferior laryngeal, and suggested that instead of permanent ligature of the carotid artery a temporary ligature might have been passed about the artery and its effect on the hemorrhage noted.

Dupuytren's Contraction.—Dr. R. J. B. Howard read a short paper on a case of Dupuytren's contraction, which he illustrated by a carefully made dissection.

Dr. Shepherd said he had always connected this affection with a gouty diathesis. It was very rare in this country, but rather common in England. It occurs frequently in old men, especially in the right hand, probably from the use of a stick. Authorities agree that it is rare in women, but during four years in the General Hospital he had seen only one case, and that was in a woman.

Puerperal Eclampsia.—Dr. Lapthorne Smith then read the following paper on this subject:—

As the elements of doubt as to the ætiology of this disease are being gradually eliminated, and as the mechanical nature of its origin, which was not long ago scarcely entertained, is being more generally adopted, I propose to make the following case the text for a brief discussion on the *nature* of the phenomenon with a view to laying down, somewhat dogmatically, a certain principle of treatment. This I think I am able to show, even within the limits of a very short paper, we are fully warranted in doing; and if such a thing can be done, it will materially help many of us younger men who have often to be guided by the experience of others who have not always very distinctly told us what their experience was:

Mrs. M., aged 28, married at 24, had her first child a year afterwards. Two years after marriage she became a widow, and remained in that condition until nine months before I saw her, when she was married again. She became pregnant the next month, and when she had reached the seventh month, or a little later, I was engaged to attend her in her confinement. As I was informed that her feet were beginning to swell, I asked for a sample of her urine, which on examination appeared clear when warmed, but was very muddy on cooling, and was found to contain no sugar, but was loaded with albumen. On examining her next day I saw that her legs were full of dropsical effusion ; the labia were so swollen with liquid that she was unable to sit down ; her bowels were confined and urine very scanty ; she had occasional slight headaches ; no disorder of vision nor of intellectual faculties. She had had no trouble whatever with her previous confinement, and felt quite well during the first six months of this pregnancy, but her abdomen was so large that I suspected twins, especially as another case of eclampsia which I attended also occurred in a twin pregnancy. I gave her cathartics and a mixture of squills and digitalis, and placed her on a strict milk diet. As this failed to ameliorate her condition after a week's trial, I changed it to digitalis and iron, with no better result. As she was rapidly getting worse, and toxic symptoms began to manifest themselves, I began to consider whether it would not be better to induce labor and empty the uterus. For I believe, as I shall show later, that the albuminuria and uræmia are due to the passive congestion or inflammation of the kidneys caused by mechanical pressure on the renal veins by the enlarged uterus. Before taking what I then thought was a very important step I availed myself of the experience of my friend and colleague, Dr. Kennedy, who agreed with me as to the necessity of taking action, but who thought it better, on account of the enormous distension of the genitals and the occlusion of the passage, to make one final effort to reduce the amount of enudation in the skin. We accordingly gave her forty grains of compound jalap powder night and morning, which produced about a quart of watery evacuations daily, and a quarter of a grain of pilocarpine every four hours, which, however, produced no effect whatever on the skin. As I feared that convulsions would come on before long, the amount of urine passed not exceeding a gill daily, I left a bottle of the A.C.E. mixture with the nurse, with instructions to use it if they came on. She gradually grew worse until about two weeks from the time I first saw her, when the accumulation of the toxic agent caused an explosion of convulsive movements of the most violent description, which were, however, easily controlled by the aid of the anæsthetic. Dr. Kennedy again met me in consultation that afternoon, and we decided that prompt action was imperative ; so we rendered her completely unconscious, dilated the os with the finger, and without much difficulty delivered her of a living and dead fœtus—the former by the forceps, the latter by the feet. There must have been nearly three gallons of amniotic fluid. She rallied well and felt much relieved, but an hour later the convulsions returned with increased severity. She remained quite unconscious all evening until eleven o'clock, when she was induced to swallow twenty grains of chloral, which was repeated three times during the night, with the result that the convulsions ceased at three o'clock next morning and did not since return. But she did not remember anything of what occurred during the time commencing two days before the convulsions began and ending a week after delivery. Her vision especially remained very disordered, not being able to see *distinctly* the things which she did see, and believing that she saw many objects which did not exist. For instance, she was quite sure that she saw a little boy standing on the bureau breaking dishes. Three days after the delivery symptoms of puerperal mania became very marked. She asked for a knife with which to kill a man whom she supposed to be in an adjoining room, and it required the united efforts of three people to keep her in bed. During all this time the kidneys continued to act very freely, as, indeed, they began to do an hour or two after the uterus had been emptied. On the seventh day she became so violent that it was no longer safe to keep her in the house, as neither chloral, morphia or atropia had any effect. On the eighth day I gave her a large dose of bromide of sodium, after which she began to talk in a rational manner, saying that the medicine had done her good, and inquiring as to the nature of her illness and how long she had been ill. Unhappily this improvement only lasted a few days, and shortly afterwards she again became so violent that I was constrained to order her removal to Longue Pointe Asylum, where she now is, after a year's detention, a lunatic. Her features have completely changed, and although quiet and docile, she evinces many of the characteristics of puerperal mania. She cannot bear to see her husband or any of her former dearest friends, although she does evince pleasure at the presence of her little boy. What is being done for her cure I am unable to say, but I fear that her recovery is at least doubtful, at any rate remote.

Sir James T. Simpson was of the opinion that puerperal mania was the direct result of the temporary disease of the kidneys, and although many able authorities differ from him in this view, I am inclined to believe that the mania is an evidence of the co-ordinating cells of the nerve centres having been bathed for a considerable time in very poisonous blood, and that the relation of albuminuria, uræmia, puerperal convulsions and puerperal mania may be stated as follows:

A moderate amount of renal congestion causes albumen to appear in the urine.

A greater amount of renal congestion causes the albumen in the urine to increase and the normal quantity of urea in the urine to diminish, and at the same time the urea being retained in the blood and bathing the nerve centres causes headache, disordered vision, etc.

A still greater amount of urea in the blood and of albumen in the urine causes poisoning and at the same time starvation of the nerve centres and dropsy of the brain to such an extent that irritation is set up and convulsions ensue.

And if this condition continues for a considerable time the nerve cells are seriously altered in nature, so that even when the cause is removed they can with difficulty or not at all recover their normal functional activity. But as no one can tell just how a certain poison produces a certain effect, I am willing to leave that still in the realms of theory in order to return to certain definite facts which now seem to me to be beyond any possible doubt. And the first conclusion I have come to after a close study of some twenty authors' observations is, that puerperal convulsions are not different from uræmic convulsions, and that they depend entirely upon uræmia and its concomitant albuminuria and accompanying œdema and uræmia of the brain. That the uræmia of the puerpera, unlike ordinary uræmia, depends on a removable cause, namely, pressure on the renal veins, or on the veins into which they empty. This is the opinion of many eminent authorities, and the one which is best supported by facts, notwithstanding some slight exceptional evidence to the contrary. One of the most significant of these facts is that the convulsions come on always during the latter half of pregnancy, and are more frequent and more severe the larger the uterus becomes. Also, that they are more frequent in twin pregnancies, as seen in my second reported case, and also in the subsequent history of my first reported case, who narrrowly escaped having them in her next pregnancy, which was a twin one.

Another strong proof of their mechanical origin is that they are much more frequent in first pregnancies, when the abdominal walls are most resisting, and where, consequently, the pressure on the veins is greatest. That we get many of the same symptoms in men or in non-pregnant women if from any cause the current of blood out of the kidneys is retarded, as, for instance, in mitral regurgitation. Only, in these cases the patient dies before the uræmia becomes sufficiently marked to cause convulsions. The fact that the urine begins to be secreted generally immediately after delivery ; the only exceptions being when the kidneys have been damaged beyond repair.

The guiding principle of treatment which I wish to lay down dogmatically is this: That unless for grave reasons to the contrary we should induce premature labor at any time after the seventh month, at which we find the urine of the pregnant woman loaded with albumen or considerably deficient in urea. By freely accepting this course it removes all doubt and hesitation in our treatment of these most anxious cases. The induction of premature labor at the seventh month, or even earlier, is a procedure totally devoid of extra danger to the mother, and it gives to the child quite as good a chance of surviving as to allow it to run the gauntlet of a much more tedious labor at full time, when its own system is in a state of uræmic convulsions as well, and when, perhaps, it must be borne under conditions and surroundings the most unfavorable. That the child in utero suffers from uræmia just as much as the mother is amply proved by cases reported by Cazeaux and others, and our experience is that few children borne during puerperal eclampsia ever survive their birth very long. In my first case the child died during the convulsions, and although I controlled them and saved the mother, it is probable that her life was purchased only at the price of the child's, for if it had not died, and she had gone on increasing in size, as I then (and I now think, mistakenly,) intended to let her do, nothing I believe could have saved her. If I had followed this course in my second case, which I now report, I do not think that the mother would now be in the asylum, and perhaps one or both of her children would be alive.

Heretefore we have been left to interfere in these cases, and the rule has been to try to carry them on to the ninth month by medicinal and other treatment. But we should remember that every day that the uterus increases in size the disorder of the kidneys becomes greater ; and the longer we delay in interfering, the danger of interference becomes more serious ; for the reflex irritability of the nerves becomes such that the slightest irritation of the periphery causes convulsive impulses to emanate from the centres. We should also remember that owing to the mechanical nature of the malady we cannot count upon the cooperation of diuretics, for even digitalis, the king of diuretics, often fails us in these cases. And no wonder, for how can a medicine which only increases the secretion of urine, because it contracts the capillaries of the kidneys and increases the flow of blood through them, have any effect when the current of blood is dammed back by the constriction on the veins.

Puerperal uræmia, if left alone, is a very serious disease, as instanced by a mortality of 12 cases out of 36 reported by Braun, although that mortality is higher than we are accustomed to here. Wieger also reports a mortality of 25 out of 65 cases. In urging interference, I may be advocating something that many practitioners are already in favor of doing, but when such eminent names as Gooch, Schröder and Playfair are on the side of letting them alone, I think that if the policy of prompt interference is the right one, as I believe it is, it is quite time that some definite law on the subject should be laid down for our guidance.

Discussion.—DR. ARMSTRONG could not entirely agree with Dr. Smith in his method of treatment. He had seen many cases of severe albuminuria accompanied with œdema where convulsions did not follow. After quoting cases where even convulsions supervened and yet mother and child were carried through, he held that only in the very worst cases should premature labor be induced.

DR. GURD said he had, within the past couple of weeks, treated two cases of puerperal albuminuria accompanied with uræmic symptoms. The first was a lady who sent for him at the end of the eighth month of her sixth pregnancy, supposing herself to be in labor. The os was found not at all dilated. Twelve hours later, finding the os not dilating, her condition was gone into more fully. The pains were spurious, set up each time she micturated, which was about every fifteen or thirty minutes, giving her great agony. She complained of severe headache, thirst, inability to sleep, drowsiness, twitchings, and had vomited several times. Temperature 102°. Her feet and ankles had been slightly swollen for about three or four weeks. She was given brisk purgatives and digitalis infusion and iron with good results. The pains ceased and all the uræmic symptoms abated. The urine was next day passed voluntarily, and in much larger quantities. It contained about eight per cent. of albumen. The following day uræmic symptoms returned. In the afternoon of this day she had what the nurse called a chill, lasting twenty minutes, all her symptoms appearing worse toward evening. She was given a bath after the manner practised in Vienna, and recommended by the Braun, which is as follows: The patient is to be put into a bath of 99° temperature, the bath to be covered with a heavy blanket, leaving the face free. The temperature of the water is to be gradually increased to 110° or 112°. She is to remain in the bath for thirty minutes. A towel wrung out of cold water placed on the head relieves any distressing head sensations. Whilst in the bath the patient is to drink large quantities of water. After coming out of the bath she is to be covered with a warm sheet and then enveloped in blankets, when almost immediately free perspiration follows. The sweating is allowed to go on for two or three hours. This bath treatment is known often to bring on genuine labor ; it did so in this case. Shortly after getting into bed she was taken with good labor pains, and in three hours was delivered of a healthy boy, evidently three or four weeks before time. Patient made a good recovery. Urine, examined three days after delivery, was free from albumen.

The second case was that of an undersized primipara, whom he had accidentally heard was much swollen about the feet, legs and face. On visiting her, she was found very œdematous and suffering from headache, loss of sleep, thirst, very frequent painful micturition, etc. Her urine contained about 30 per cent. of albumen. She had yet two weeks to go. Under purgative and diuretic treatment, with almost exclusive milk diet, all the symptoms passed away. She was now comfortable in every respect. Albumen gradually lessened, till now, ten days after treatment, it was only 12 per cent.*

Dr. Trenholme thought that the condition of the circulatory system had much to do with the prognosis and mode of treatment. In mitral difficulty, or whenever the circulation was otherwise affected, the cases were much more serious. He had frequently seen marked œdema and albuminuria in patients otherwise sound, and no serious trouble followed. He thought that operative measures should not be resorted to if the circulatory organs were sound and the patient otherwise healthy.

Pathological Specimens.—Dr. Wm. Gardner exhibited the following specimens and related the cases :—

1. *A bottle of fluid removed from a retro-peritoneal cyst of the left loin.* The patient, female, aged 28, unmarried, asserted, and her mother confirmed the statement, that from childhood she had been large in the belly, but that in recent years she

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* On the 17th she was delivered of twins. At the end of a day's hard labor she had two convulsions, when the forceps were applied for the first child ; the second was extracted by the feet. On the 22nd all were doing well.

had been growing larger and had been suspected to be pregnant. Always well and able to work till a week previous, when she suddenly took ill with rigors, high fever, perspirations, vomiting and severe pain and tenderness in the left loin. On examination, a rounded smooth tumor occupied the left loin, enlarging the abdomen considerably on that side and extending beyond the median line to the left; upwards it reached the edges of the ribs; downwards it reached the margin of the pelvis, but did not dip into that cavity. There was absolutely nothing further to be had in the way of a history. Urine normal. The nature of the case being doubtful, and the symptoms urgent, it was decided to explore by abdominal section. An incision two inches long was made in the median from the umbilicus downwards. On opening the cavity the cyst was found to lie behind the peritoneum and intestines. The colon lay in front and in such a position as to render the management of the case too difficult. This opening was closed and another made over the most prominent part of the tumor, about three inches to the left of the median line, on a level of the umbilicus. On reaching the tumor it was tapped and 70 ounces of a dark-brown turbid fluid, containing numerous iridescent crystals of cholesterine, was removed. The opening was enlarged, its edges stitched to the edges of the abdominal incision, and a glass drainage-tube left. From the moment of the operation the girl ceased to have pain, fever or any other symptom. The discharge was slight. The cavity shrank rapidly, and when patient was discharged, twenty-six days after the operation, wearing a short piece of rubber drainage-tube, it was almost obliterated. The fluid contained a large quantity of pus. The cyst was evidently an old one, possibly congenital, springing from near the kidney and had suddenly taken on inflammatory action. Dr. Gardner said that of course the treatment was open to criticism, inasmuch as the fluid could have been reached from the loin posteriorly without opening the peritoneal cavity, but he felt more at home in opening the abdomen than the loin, and the result seemed to justify the course pursued.

Dr. Ross related a similar case that occurred in the practice of Dr. Roddick four years ago. A cyst in the neighborhood of the kidney was tapped, and found to contain a brown fluid filled with crystals of cholesterine.

2. *A cysto-sarcomatous tumor of the ovaries and uterus*, removed six days ago from a young married woman of 21, the mother of one child a year and a half old. The tumor had been noticed first in October, '86, and had grown rapidly, causing much pain, emaciation and interference with functions of both bladder and bowel. It was uneven, hard in parts and elastic in others, predominating on right side. The whole vaginal roof was a hard mass, the vaginal portion obliterated, and the os felt only with great difficulty. There were adhesions to omentum, extensively to colon and rectum, and to the whole floor of the pelvis. The fundus uteri was smelted into the mass, and the operation was finished by encircling the cervix with Koeberle's clamp and, after amputating, securing it with pins externally at the lower angle of the wound. The hemorrhage was free ; some of the cysts burst during removal. The cavity was well washed out with plain warm water and drained. Pulse ran high, 160 and over during the operation, and hypodermics of brandy were freely given. Every symptom had been favorable till the sixth day. The day after the operation the pulse was under 100, and the temperature had been normal for five days. The temperature then rose and remained high with fluctuations for six days. She is now, on the nineteenth day, quite convalescent. The wire was cut and the clamp removed on the third day.

Hydrocephalus.—Dr. W. G. Johnston exhibited a case of chronic hydrocephalus observed in making an autopsy upon a patient who died of secondary cancer in lungs and liver. The primary growth, a scirrhus, was removed from the left mammæ by Dr. Roddick sixteen months before. Patient had been under observation off and on during this entire period without any cerebral or mental symptoms having been noted. Convolutions flattened. Lateral ventricles distended, containing over eighteen ounces clear fluid ; the venæ galeni involved in dense mass of fibrous tissue apparently of inflammatory origin. They were not obliterated. No other abnormality beyond small mass of secondary cancer external to dura in course of anterior meningeal artery. Fontanelles closed by bony union. Skull cap flattened and bones very thin, maximum being 1-6″ and minimum 1·10″ over convexity. Cranial cavity capacious.

Tumor of the Prostate.—DR. BELL exhibited specimens from a case of tumor of the prostate, and read the following history of the case :—

J. H., aged 60, a farmer, was admitted to hospital Oct. 9th, 1866. He was suffering from general cystitis, acute prostatitis and right epididymitis, and retention of urine. He had always been a regular and temperate liver, and had enjoyed the best of health until three years ago, when he had some hemorrhoids removed. He had never had any venereal disease of any kind. From that time he suffered from frequent micturition, inability to empty his bladder at times, and his urine always contained a whitish deposit when passed. He had been taught to use a gum elastic catheter, and for two months before coming to hospital he had been obliged to use it every day, and seldom made water without it. On admission, his prostate gland was very much swollen, tender, hot and painful. He passed about sixty ounces of urine daily, which was neutral or faintly acid in reaction, and deposited on standing from 20 to 25 per cent. by volume of muco-pus. There was apparently no albumen in the urine beyond that produced by the pus. He had a subfebrile temperature, but his general condition was good. He was ordered to be kept in bed on milk diet, with linseed tea and water *ad lib.*, hot hip baths and opium suppositories when necessary, and his bladder was emptied three times daily with a soft rubber catheter. The acute inflammatory symptoms soon subsided, the pus in the urine diminished very considerably, his temperature became normal, and he was very much better in every respect, but could not empty his bladder. From the 12th of November the bladder was washed out daily with plain warm water. He improved steadily until the 29th of November, when he had a severe chill and great pain in the right loin. The urine became scantier, and was loaded with pus for a few days, but soon became more abundant and less purulent again. The patient became dull and somnolent, with dry, brown tongue, moderate fever and obstinate anorexia, and gradually sank and died on the 18th of December.

At the autopsy, Dr. Johnston reported the middle lobe of prostate enlarged, and containing a small abscess. Bladder mucosa somewhat congested. Ureters normal. Both kidneys enlarged slightly and hyperæmic ; a little mucus secretion in pelves, which were otherwise normal. Throughout cortices a few small suppurating points corresponding with and apparently originating in pyæmic infarcts. Spleen enlarged and soft. No further examination was allowed.

CHATHAM MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, Feb. 4th, 1887.

THE PRESIDENT, DR. RUTHERFORD, IN THE CHAIR.

Cases in Practice.—DR. BRAY reported a case of double synchronous amputation of the upper extremities in a boy seven years old, with good result. The injury necessitating this operation was a crush of both arms by a shunting railway-car. One arm was taken off two inches from the shoulder-joint, the bone not being shattered into it, and the other about the middle of the forearm. Dr. Bray wished to know if his treatment was correct, or should he have disarticulated at the shoulder.

Most of the members present thought he pursued the proper course.

DR. RUTHERFORD related the case of a boy shot in the palm of the hand, the bullet lodging about two inches above the wrist. The bullet was removed and both wounds closed with lint soaked in compound tincture of benzoin, with compresses of wadding over this. Both wounds were perfectly healed and the boy able to return to his work in four days.

DR. HOLMES narrated a case of suppression of urine.

Treatment of Pneumonia.—DR. BRAY read a paper on this subject, dividing his cases into children, adults, and those over forty-five years old.

Children.—First clean out the bowels with oil or rhubarb and soda, with a little grey powder, then give a mixture of spirits mindererus, æther nitrosi, and in some cases tincture aconite, with small doses of quinine. At the same time he envelops the chest and back with hot linseed poultices, applying a leech or two over the chest if there be much dyspnœa. After the acute symptoms have subsided, substitute a cloth soaked in chloroform liniment (B.P.) and covered with oiled silk for the poultices. If cough be troublesome, a stimulating expectorant of carbonate and muriate of ammonia with squills and senega is given. Diet on milk, adding lime-water and pepsine when necessary. He rarely gives anodynes to children, except when acute pleurisy is present. If the latter be subacute, with much effusion present, he applies iodine or cantharidal collodion.

Adults.—Much the same treatment will suffice. Pain must be controlled by opium. If the heart be weak, leave out the aconite and add digitalis to the mixture given in the acute stage in children, also give stimulants in the form of brandy or whiskey. The great danger in these cases is from heart failure, and this must be guarded against by every possible means, medicinal and dietary.

In the last class of cases stimulants must be given from the first, unless the pyrexia be very high, and even then they often act well, slowing the pulse and lowering the temperature. In these cases especially, avoid blisters and all depressing measures. The reader of the paper has seen nothing to convince him that pneumonia is contagious, but believes that climatic and atmospheric influences produce endemics or epidemics of it. When this latter is the case, the prognosis must be guarded and stimulants given early.

All present joined in the discussion following this paper, and in general agreed with the reader of it.

Stated Meeting, March 11, 1887.

J. P. RUTHERFORD, M.D., PRESIDENT, IN THE CHAIR.

Fracture of the Trachea.—DR. FLEMMING reported a case of this nature, with laceration of the adjacent soft parts. This injury is one that a surgeon is rarely called upon to attend from the protection afforded these parts by the chin and beard, and the resiliency and mobility of the parts themselves. So seldom does it occur that some of the late bloody wars do not give the history of a single case. The French contingent in the Crimean war gives but one reported case of 460 wounds implicating the neck, whilst the English contingent furnishes eight cases out of 147 injuries to the neck. The chief sources of this injury in ordinary practice are kicks from men and horses, falls on hard blunt points, various projectiles propelled from machinery, as well as from the machinery itself. When a case does occur, it is fraught with much perplexity from the implication of both respiration and circulation. The following case Dr. Flemming was called to see March 6th, 1884 :—

J. B., aged 46, was found much exhausted from loss of blood and a feeling of impending suffocation from large quantities of blood flowing into the lungs. With each forced expiration quantities of fluid blood and clots were expelled through the lacerated opening. An examination showed the fourth, fifth and sixth rings of the trachea cut completely off and the ends separated half an inch. The missile that caused the mischief was a piece of white ash 3½ feet long and about an inch thick, and though good timber, was broken in two by the power of the resistance to the blow. It was hurled from a driving-wheel making 1400 revolutions per minute endwise, like an arrow, and struck the trachea immediately above the sternum. The patient was immediately turned upon his side, and as far over on his face as possible, with the view of preventing the blood entering the windpipe, and ice applied to the injury to check hemorrhage, which, fortunately, had the desired effect. He was subsequently placed in a room the temperature of which was maintained at about 80°, and kept somewhat moist with steam. The patient's head was drawn down towards his chest and kept there. A piece of oiled silk and an ice-bag covered the wound. His pulse a few hours after the accident was 120 and temperature 180°F. The patient felt comfortable, but exhausted. Ergot and Bro. Pot. was administered, with milk and beef tea for diet. The patient progressed favorably for five days, when a violent hemorrhage occurred, not ceasing until the patient was apparently almost moribund. The following day another hemorrhage took place, but not so profuse as the previous ones. The greatest difficulty was found in endeavoring to check this hemorrhage, which came not only from the veins in this neighborhood, but also from an artery, probably the inferior thyroid, which was beyond reach, the injury being in the intra-clavicular notch, and even if accessible, the patient was almost beyond control from coughing and expiratory efforts to expel blood from the lungs. Hot water and ice was of no use. Pressure or any attempt at packing the wound could not be borne, as it interfered with respiration and prevented the escape of the returning clots from the lungs. After these hemorrhages his recovery was uninterrupted. His temperature ranged from 100° to 102° for a week after the accident; afterwards it was always normal. The wound was perfectly healed in six weeks. Before the accident the patient possessed a good singing voice, but since has suffered from diplophonia, both in singing and talking, but this is disappearing gradually. One year ago he suffered from a severe attack of pneumonia, and experienced much trouble in expectoration, a difficulty that has existed since the accident.

Lithotrity ; Typhoid Fever.—Dr. Holmes reported a case in which he had performed lithotrity, the first case of vesical calculi that had come under his observation during a practice of twenty years in this county. The patient had suffered for two years with symptoms of calculi, and when he came under notice was greatly emaciated, and was suffering from hæmaturia and great vesical irritation. He crushed twice, using Bigelow's lithotrite and evacuator. There was an interval of two weeks between the operations. After the first crushing the symptoms greatly ameliorated, but a small portion of stone was detected by the sound. The amount of stone removed by the first crushing weighed four drachms ; that by the second, one drachm. About ten days after the second operation typhoid fever developed and ran a typical course ; during the course of the fever there was no vesical symptoms whatever. The man is now perfectly well.

TORONTO MEDICAL SOCIETY.

Stated Meeting, Jan. 20th, 1887.

THE PRESIDENT, DR. MCPHEDRAN, IN THE CHAIR.

PATHOLOGICAL SPECIMENS.

DR. TEMPLE presented a *Uterus*, in the anterior wall of which was a large fibroma-myoma. The specimen had been removed from a patient aged 28 years, unmarried. The growth commenced more than two years ago, and latterly had increased rapidly in size. The patient had also failed greatly in flesh and strength, having decreased in weight 32 lbs. within a few months. The operation performed was supra-vaginal hystereetomy. An incision as short as practicable was made in the median line. The broad ligaments were transfixed at either side and tied in two sections, one of which contained the ovarian and the other the uterine artery. The uterus was then eventrated and amputated about half an inch above the external os, the stump being held in Lawson Tait's uterine clamp. The edges of peritoneum were then stitched over the cut margins of the broad ligaments, and the abdominal wound closed with deep and superficial stitches. The tumor was a sub-peritoneal fibro-myoma situated upon the anterior wall of the uterus. In this variety of tumor there is not much enlargement of the uterine cavity, and consequently metrorrhagia is not a marked symptom. Patient is now in her fifth day and doing well. Highest temperature 102° ; highest pulse, 104.

DR. ROSS exhibited a specimen of *hœmato-salpinx* occupying one tube without producing occlusion of its lumen. The patient is the mother of seven children. She suffered from menstrual irregularity, having, perhaps, no discharge for about six weeks, and then an almost continuous flow for an equal length of time. The discharge had an extremely bad odor, a circumstance strongly diagnostic of hæmato-salpinx. The patient had been in ill health for three years, dating from a miscarriage with a bad result which occurred at that time. The tubal cyst was ruptured during the first vaginal examination, and acute peritonitis developed within twenty-four hours. Operation was advised. A short incision was made in the median line, a mass of clotted blood which was found in Douglas' *cul-de-sac* was removed, as were also the ovary and tube of the affected side. The abdominal cavity was then carefully washed out and the wound closed. The recovery was uninterrupted, the temperature never rising above 100°. This case illustrates a condition even the existence of which was, until recently, denied by Emmet.

DR. CAMERON showed a *cystic tumor of the ovary* which had been removed from a young married woman. The patient had suffered for four years with attacks of intense pelvic pain, evidently due to circumscribed peritonitis. During the first of these attacks obstruction of the bowels occurred, and an abscess formed and ruptured into the bowel. She had been pregnant twice, and both gestations were accompanied by a great deal of pain, especially on the right side. Of late the attacks of pain had increased in frequency and severity, and operation was advised. The right ovary was found to be cystic and was removed. The case was uncomplicated and recovery uninterrupted.

Dr. Cameron also showed the *right ovary and tube* from a case with the following history : The patient had suffered from stenosis of the cervix, and Goodell's operation was performed. Inflammation followed, resulting in occlusion of the tubes. As no improvement took place after several months of treatment, Tait's operation was performed. The right ovary was found to contain three or four hæmatic cysts (Savage). It was removed with its tubes with difficulty, being firmly bound down by adhesions. The left ovary was so imbedded in inflammatory deposits that it could not be removed. A good recovery followed.

DR. POWELL exhibited a *tumor about the size of an orange* which had been removed from the left forearm. It proved, on microscopical examination, to be a spindle-celled sarcoma, which had undergone myxomatous degeneration. As permission to amputate at the elbow-joint could not be obtained, the tumor was dissected out as thoroughly as possible and the wound closed with sutures. In about three months the tumor reappeared, and the surgeon under whose care the patient then was amputated about the middle of the arm. The axillary glands and lungs became affected, however, and the patient ultimately died of the lung affection. It seems fair to assume that had amputation been performed as advised in the early stage, the disease might have been eradicated.

DR. CANE exhibited the *brain from a patient dying of general paralysis of the insane.* The patient was a male, aged only 36. His character previous to his cerebral trouble had been good. He was a temperate man, and had always enjoyed moderately good health. On 11th May last he was brought to the Toronto Asylum with all the evidences of general paresis. He steadily grew worse and died January 19th. The specimen showed great thickening of the dura mater and also of the calvarium, which was markedly indurated. A large amount of serous fluid was found beneath the membranes. The arachnoid and pia mater were thickened and milky-looking. The adhesions between the brain and membranes were marked over the convolutions, but in the sulci no such adhesions were found. On forcibly stripping the membranes from the convolutions, the convexities of the latter showed a roughened appearance which has been compared to mouse-nibbled cheese, and is somewhat characteristic. Contrary to the generally received opinion, this disease is not one of old age, but generally attacks those in the prime of life, the majority of its victims being between 35 and 40 years of age.

DR. GEO. WRIGHT presented the *kidneys* of a man who had died of Bright's disease complicated with bronchitis of the smaller tubes. The urine contained albumen and casts. Epistaxis was a marked symptom, and pericarditis developed towards the last. The kidneys were markedly cirrhotic.

DR. W. H. B. AIKINS showed a *Larynx*, the vocal cords and arytenoid cartilages of which were covered with tuberculous ulcers, in which the microscope revealed the bacilli of tuberculosis in abundance. The interesting point in connection with this case is that no tuberculous deposits were found in the lungs.

—Dr. C. W. Earle has been appointed President of the Chicago Gynæcological Society.

CANADA
Medical and Surgical Journal.

MONTREAL, APRIL, 1887.

IMPROVED METHODS FOR RECOGNIZING TUBERCLE BACILLI.

Now that the detection of tubercle bacilli forms such an important means of diagnosing positively obscure cases of tuberculosis, any method by which its detection is facilitated is of great practical importance. The staining methods are now so accurate that even a single bacillus need not be overlooked, and can be readily picked out from material containing thousands of putrefactive bacteria. Recently attention has been directed to render the discovery of a relatively small number of the bacilli in sputum more easy. Reidert's method consists of mixing about an ounce of sputum with a like amount of water, adding six or eight drops of caustic potash, and boiling, subsequently adding more water, and boiling till a thin fluid is obtained. This is allowed to settle in a conical vessel, and in the sediment the bacilli are found in large numbers. The same result may be obtained in a more simple manner by allowing a large amount of sputum (six to ten ounces) to stand in an incubator or other warm spot several days, when the sputum will liquify from simple putrefaction and the sediment can be examined for bacilli. Any elastic tissue present will also be found abundantly in the sediment. A further advance is the discovery by Mons. Nocard and Roux of Paris that the troublesome serum method of culture can now be dispensed with, since the addition of about five per cent. of glycerine to gelatine or Agar-agar jelly makes an admirable medium for the growth of the bacillus. These results have since been confirmed by others. A further advantage of this method is that fractional culture can be practised and the bacilli ultimately obtained pure even when previously mixed with putrefactive organisms. By the serum method it was impossible to obtain pure cultures unless the material was originally in a pure state, consequently preliminary inoculations of animals had to be resorted to, a method never free from possible fallacy, as susceptible animals develop the disease spontaneously.

THE HÆMATOZOA OF MALARIA.

A report of an address before the Philadelphia Pathological Society just published by Dr. Osler in the *British Medical Journal* contains much interesting and practical information. It is based on the careful study of seventy cases, both of acute and chronic malaria. He considers that subsequent researches have revealed no new facts of importance with regard to the nature and appearances of the parasite since Laveran's work in 1881, and agrees that it is allied to the family of monads. It occurs under the following different conditions: 1, Amœboid bodies free or within the red or white cells; 2, Crescent-shaped bodies found chiefly within the red cells usually containing dark pigment granules (melanin), but sometimes hyaline. These latter, as well as a peculiar rosetted form, probably due to segmentation, are noticed by him during the attacks and in acute cases. The others were seen in about equal abundance both during the attacks and in the intervals, and seen in all forms of ague. Another form more rarely met with was a free body with two to four ciliæ showing rapid movement. All forms rapidly disappeared when patients were fully cinchonized. This fact, together with the obvious action of the parasite in altering and absorbing the hæmoglobin of the blood, he regards as positive proofs of a causal relation between the parasite and the disease.

The *technique* is a very simple examination of fresh blood without the use of reagents, or else drying and staining with fuchsin or violet. High powers are necessary, a homogenous immersion lens being preferable.

The chief interest of the paper, however, is in discussing the practical value of these bodies with regard to diagnosis. In eight cases of apparently true malaria it was not found ; one of these was an acute case in which it was detected at subsequent examinations ; in the others, the case was either only seen once or had taken quinine. Of still greater interest were some cases of supposed malaria where the parasite could not be found ; four proving to be cases of undetected phthisis, one of septic pneumonia, and two of suppurative renal disease. On the other hand, in certain cases a positive diagnosis of malaria could only be made by examining the blood.

PSYCHICAL EPILEPSY.

Psychical disturbances frequently precede a regular epileptic paroxysm. This may be nothing more than undefined restless feeling, or it may take the form of irritability of temper, or terror with a sense of great impending danger. Again, great exhilaration of spirits may be present for hours or days before the regular paroxysm srts in. After the fit is over, the form and variety of mental disturbance is as great as that which preceded it.

The psychical symptoms in the above cases form only a part of the complete disease. There are cases, on the other hand, where mental disturbance alone takes the place of the usual epileptic paroxysm. It is not at all rare to find epileptics who have several complete fits in the year, and during the intervals attacks of great mental restlessness lasting hours, or it may be even days, the patient having as little knowledge of what took place during this period as he has of what happened during the ordinary paroxysms.

The following case reported by Prof. Max Leidesdorf of Vienna illustrates this form of epilepsy : A man aged 36, with a markedly neurotic family history, was admitted to his clinic in the year 1884. From childhood to his 24th year this patient suffered from frequently recurring attacks of ordinary epilepsy. After this period these attacks ceased and were replaced by suddenly occurring attacks of great restlessness lasting from one to two days. After recovering his usual state, he has no remembrance of anything that happened during his restless period.

There are numerous cases on record of a similar character. There is another class of cases where periodical recurring attacks of mental disturbance forms the sole symptom of what is a true epilepsy. The paroxysm in these cases takes the form of an acute mania, lasting a few hours or days. There is neither convulsions or apparent loss of consciousness during the period, but after it passes away the patient has no remembrance of what happened. It will be at once apparent how all-important it is to separate these cases from ordinary acute mania,—important not only in prognosis, but especially in directing the treatment of the case. It is to these paroxysms that Liedesdorf proposes to give the name of psychical epilepsy. In coming to a conclusion as to the nature of an acute maniacal disturbance, he considers the following as the most important points:

1. A history of epilepsy or alcoholism in the parents, or of "concussion" of the brain from traumatism or fright, etc.
2. When the psychical disturbance is always preceded by a definite aura.
3. When this aura is always of the same nature.
4. When the attack is sudden, and does not at most exceed a few weeks in duration.
5. When it is followed by loss of memory of events during the period.
6. When the attacks recur with a certain regularity.

When all the above conditions are present, then, and then only, does Leidesdorf consider that we are fully warranted in saying that we have a case of psychical epilepsy to deal with.

CHRONIC GLANDERS.

A unique case of glanders is recently reported (*Zeitschrift f. Klin. Med.*) which lasted twenty months. It occurred in a Russian physician, being contracted during an autopsy. The only constant symptom was moderate fever, lasting a few days at a time, with intervening periods of normal temperature. The nares were unaffected throughout. Some temporary bronchopneumonia, thought at the time to be due to glanders, proved at the autopsy to have been, in reality, syphilitic in character, gummata occurring in all the internal organs, as well as amyloid disease. The diagnosis could not be made till after ten months. Subcutaneous abscesses and subsequently suppuration occurred in the tarsus, fibula and elbow joint. This pus, inoculated into guinea-pigs, produced undoubted glanders. At the autopsy, death was found to be due to intercurrent acute nephritis, apparently septic in nature; and though glanders bacilli were found in great numbers throughout all the organs, they were not regarded as the cause of death. An unsolved problem suggested by this case is, whether, in a healthy man, recovery would ultimately have been complete, or whether the mild and protracted course of the glanders were due to its occurring in a syphilitic subject.

A PLEA FOR THE MORE EFFICIENT INSPECTION OF MEAT.

The amount of preventible disease in the world is very great. Slowly, but surely however, as science advances it is becoming less and less. Montreal has had a truly sad experience of the ravages of smallpox, a disease which we include in the lists of those that can be prevented, if only those means are used which science has shown to be of avail. The great and irreparable injuries caused by smallpox in this city are evident to the most superficial. It is different, however, with the poison of another disease which claims its thousands. We refer to tuberculosis. It is only within a very brief period that the truly infectious nature of consumption has been established. The poison here is more subtle and slower in its operation than in the case of the poison of smallpox. But while smallpox claims its thousands, consumption claims its tens of thousands. If ever this dire scourge of humanity is to be removed, it will be through the progress of preventive medicine and not through any possible directly curative means. If once this statement could be recognized as true and acted on by the public, the first important step would have been taken in its removal.

Our object in drawing attention to this subject at present is to show how, at least in one direction, this may be accomplished.

It is a well-established fact that tuberculosis is communicable from the lower animals to man. There can be no doubt that many cases of consumption are directly due to the eating of tuberculous meat. In any given case it is extremely difficult to trace this mode of origin, but of the general fact there can be no question. Tuberculosis is a very common disease in cattle. How all-important is it then, that there should be an efficient inspection of meat before it is allowed to be sold? In Montreal there are a few men whose duty it is to see that no diseased meat is sold. Unfortunately, however, for the public health, these men are quite incapable of performing those duties. They may be able to recognize meat which is in a decomposed condition from that which is not, but here their knowledge ends. If the matter were not so terribly serious, it would be laughable to appoint butchers to detect the presence or absence of tubercle in meat, but such really is the state of matters in this great city.

Consumption is not the only disease that is communicable from animals to man. Tapeworm is another of those diseases that is propagated in this way. As the result of investigations made by Dr. Osler and Mr. Clements in 1883, it was found that of 1000 hogs examined 76 were found to have tapeworm in its larval stage, and as the result of enquiry among the medical men of the city it was ascertained that there were fully two hundred people at that time suffering from tapeworm, due to the eating of infected pork. Now this disease could be practically prevented by an efficient system of inspection. Montreal pays now $2,400 annually for an inspection that in many cases is worse than useless; for less than three times that amount the system could be made thoroughly efficient. We believe that we have only to point out the crying need there is for the employment of competent men to do this work to see it quickly fulfilled. We know that our able Health Officer, Dr. Laberge, is fully alive to the urgent necessity there is for action in this grave state of affairs.

PRESENTATION TO DR. WORKMAN.—It affords us great pleasure to record an instance of the paying of a well-deserved tribute to genuine merit and honest worth. Dr. Joseph Workman, the oldest living graduate of McGill University, was a few days ago made the recipient of a handsome present by the directors and superintendent of the Homewood Retreat in Guelph.

GYNÆCOLOGISTS *VERSUS* GENERAL SURGEONS.

To the Editors of THE CANADA MEDICAL & SURGICAL JOURNAL.

DEAR SIRS,—I notice in the March number of your valuable JOURNAL an editorial note headed "Gynæcologists *vs.* General Surgeons," in which you show a great lack of knowledge of the present and past position of abdominal surgery; you most unfairly state that we owe the "great advances of abdominal surgery generally" to the gynæcologists, and hint that the future progress in this department of surgery will be due to them. Again, towards the end of your rash and indiscreet note you boldly say that "every competent and unprejudiced onlooker must feel that the general surgeon of the present day has not proven himself equal to the gynæcologist in abdominal surgery."

It seems to me that the merest tyro in the profession knows that the triumphs of abdominal surgery were coincident with the introduction of antiseptic methods by Sir Joseph Lister, a general surgeon. What, may I ask, did the gynæcologist do before the advent of antiseptic surgery and its accompanying principles of cleanliness and drainage? Nothing. I freely admit that the gynæcologists, aided always by antiseptic surgery in the perfecting of which they took but little part, have made vast strides in the surgery of the pelvic organs, and have also assisted in the general advance of abdominal surgery, but has the general surgeon in the meanwhile done nothing? To whom do we owe the present state of the surgery of the stomach and intestines, if not to the general surgeon. Have you never heard of Billroth, Milkulicz, Czerny, Woelfler, Loreta, Bull, Dennis, Bryant, Bergmann, Treves, Verneuil, Nussbaum, Ransohoff, Kocher, and hosts of other men who are well known in connection with this department of surgery? With what names is the initiation of kidney surgery identified, if not with those of general surgeons? The early (and many recent) operations performed on the kidney by gynæcologists were the results of mistakes in diagnosis or the accidental wounding of the ureter. Who first extracted a stone from the kidney after careful and accurate diagnosis? Mr. Henry Morris of London, a general surgeon. Who first designedly removed the kidney in 1880 but a general surgeon, Gustav Simon of Heidelberg?* By whom have the greater number of kidney operations been performed, if not by general surgeons? I merely mention such names as Bergmann, Le Dentu, Lucas, Beck, Godlee, Marsh, Park, Lange, Polaillon, Treves, Czerny, Bardenheuer, etc.

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* Marchetti (a general surgeon) in the 17th century successfully removed a calculus from the English Consul Hobson.

In regard to the surgery of the spleen, the same may be said. General surgeons removed the spleen as far back as 1549, when this operation was successfully performed at Naples by Zaccharelli and Fioravanti. Latterly the general surgeons have performed splenectomy quite frequently. I might mention in connection with the surgery of the spleen the names of such general surgeons as Chiarleoni of Milan, Ceci of Genoa, Franzolini of Undine (Italy), Credé of Dresden, Billroth of Vienna, Haward and Bryant of London, and many others.

In the surgery of the pancreas but little has yet been done, and that little by general surgeons.

Excluding the pelvic organs,† the liver only now remains, and in this field of surgery one gynæcologist (or as he now prefers to be called "abdominal surgeon") has distinguished himself more perhaps than the general surgeon. I refer to Mr. Lawson Tait, under whose ægis most gynæcologists now shelter themselves, and who, perhaps, more than any other man has performed wonders in connection with intra-peritoneal surgery. But this does not prove that all the advances in abdominal surgery are due to the gynæcologist any more than one swallow makes a summer. In the surgery of the liver, Langenbuch, a general surgeon, has also distinguished himself; so have Lindemann, Lihotzky, Trendelenburg, Schede, Cripps, Lange, and many others.

The first ovariotomists were not gynæcologists, and even Spencer Wells commenced to perform ovariotomy as a general surgeon, and never became a gynæcologist.

I think I have shown that while the general surgeon has been occupied with advancing the condition of the surgery of the whole body, he has not neglected the abdomen, and need not fear comparison with the gynæcologist. The surgery of the thorax, head, neck and extremities has advanced *pari passu* with that of the abdomen, but perchance these regions, when the abdomen has been exhausted, will also be invaded by the omniverous gynæcologist. I see a vision in the future of the special organs belonging to the male in the ruthless and sacrilegious hands of the ubiquitous gynæcologist, who is continually, like Alexander, seeking new worlds to conquer. Then, alas! will come the deluge, for testicles will be much easier to remove than ovaries. But while waiting for the coming millenium (?), when the gynæcologist shall possess all things, what is the poor male, who also possesses an abdomen, to do? Is he to trust himself in the hands of the general surgeon and die the death?

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† The recent great advances in the surgery of the bladder have been entirely due to general surgeons—*e.g.*, Sir H. Thompson, Volkmann, Harrison, etc.

Nay, had we not better start a new specialty of surgical anthropology; with trained anthropologists in our midst the ever advancing tide of gynæcology may, perhaps, be stemmed for a time at least.

Now, Mr. Editor, do you not think it high time for the gynæcologists either to confine themselves strictly to their specialty or else don a new name and not follow in the track of the homœopaths, for soon gynæcology, like homœopathy, will become a mere shibboleth to juggle with and to entrap unsuspecting womankind into submitting to intra-peritoneal examination of its organs.

I fear I have already taken up too much of your space, and must subscribe myself, without shame, in spite of the sneers of your " competent and unprejudiced onlooker,"

A GENERAL SURGEON.

[We are glad that our few gentle words on " Gynæcologists *vs*. General Surgeons" in our last number has called forth the above interesting communication from " A General Surgeon." We are not at all surprised that the general surgeons should be alarmed and even indignant at the invasion of a territory which they fondly believed to be theirs and theirs only, especially when they see it invaded by a band of remarkably able men. All specializations of work in all fields of human progress meet with opposition in the beginning. Is it then to be wondered at that the general surgeon should take alarm when he looks into the near future and finds himself practically excluded from work in abdominal surgery? It must be apparent to every thinking medical man that we will soon have a distinct class ot the profession whose work and energies will be devoted to the surgery of the abdomen, pure and simple. It makes little difference whether this class will evolve out of the general surgeons or out of the gynæcologists. At the present time gynæcology appears to supply the elements for the more perfect fruition. It is not half a century since the general surgeon occupied the entire field. What would be the state of ophthalmology at the present time if it were still in the hands of the general surgeons? What would be the condition of otology if there had never evolved out of chaos a Politzer or a Gruber? Would laryngology be in its present advanced state if none but the general surgeon practised it? Before another decade passes away the general surgeon will have relinquished all claim on the territory of the abdomen. Our prophetic eye does not carry us so far into the future as the time predicted by "A General Surgeon," when the male special organs will be given over to any distinct class. Seeing "that the testicles are much easier to remove than the ovaries," it will be safe to leave their extirpation to the general surgeons. Our correspondent reminds us that the first ovariotomists were general surgeons. We would remind him that all great men were babies once.—Ed.]

NOTES AND COMMENTS.

More and more, as the years go by, the surgeon invades regions regarded as the special province of the physician, and with remarkable success. This is particularly the case with diseases of the liver. Mr. Tait's report to the last meeting of the British Medical Association of his operations performed in cases of abscess, hydatids and gall-stones shows the success which may attend a bold and at the same time skillful surgery. In recent numbers (Feb. 19th and 26th) of the *Medical News* Dr. Ohage of St. Paul reports two interesting cases, one of cholecystotomy (incision) and the other cholecystectomy (removal), and gives a very useful practical account of these operations. It is to be hoped that these reports will stimulate surgeons on this side of the Atlantic to greater activity in this department. Recently Langenbeck of Berlin, who devised the operation, has published additional cases of removal of the gall-bladder, and urges this operation in preference to cholecystotomy.

A few weeks ago I saw a case with Dr. Bolling of Chestnut Hill which illustrates some of the difficulties in the way of successful hepatic surgery. A woman, aged about 50, well nourished and previously healthy, had had jaundice since Christmas, with great pain, often paroxysmal, in region of liver. She had had two attacks of hepatic colic, and gall-stones had been found in the stools. She had lost flesh and had had for about two weeks well-marked attacks of hepatic intermittent fever—rigors, hot stage, and sweats. The liver was not enlarged ; gall-bladder not to be felt, though the abdominal walls were too thick for satisfactory palpation. The condition was becoming serious ; tongue dry, pulse rapid, and there was abdominal tenderness, with slight swelling. Dr. Agnew opened the abdomen and found a stone in the common duct, with great dilation of the gall-bladder, from which 18 ozs. of bile was aspirated. The distension was entirely *below* the edge of the liver, and only the tip of the enormous sac projected for three-fourths of an inch beyond the margin. On examination, the head of the pancreas seemed unusually firm and hard, and was probably the seat of a small new growth. The patient sank and died the day after the operation. No examination was made. The previous attacks of jaundice, with the passage of gall-stones, and the occurrence of the intermittent hepatic fever, which rarely occurs except with calculi, left very little room for doubt as to the diagnosis. The possibility of cancer was discussed, as the association of gall-stones with malignant disease is so common, particularly in women. An interesting clinical point is the existence of an enormously distended gall-bladder without the appearance of a tumor below the margin of the liver.

The days have come when nothing can be hidden, everything must be revealed, and what is done in the closet is soon proclaimed from the house-top. Right or wrong, true or false,—what matter ? so that it makes the newspaper sell and tickles the itching ears of a fatuous and gossip-loving generation. I mentioned last month that Bergeon's treatment of phthisis by rectal injections of gas was receiving a trial at the Philadelphia Hospital. On Sunday, the 20th ult., one of the leading daily papers came out with a flaring account, headed A DOCTOR'S VICTORY ! ! NO MORE CONSUMPTION ! ! and gave a highly-colored description of the marvellous results which had followed the experiments. Other papers have taken up the subject, and even the Philadelphia *Ledger*—model of a family newspaper—has had a leading article on the virtues of the gas method. The whole thing is so comical, that one might make a joke of it, did the subject not present serious aspects. The method does seem to be useful in certain cases, lessening the expectoration and cough, and reducing the fever. Some of the patients, too, have gained in weight ; but, so far, it has had here only six weeks' trial, and the publication of these sensational reports of the wonderful curative effects will exercise a most injurious influence, and will seriously interfere with a careful scientific study of the question. Already hundreds of letters have reached Dr. McLaughlin, the chief resident physician at the Philadelphia Hospital, asking for details, and it is evident that reports have been telegraphed all over the country and even to Europe. As an illustration, I may mention that I had a cable from a grief-stricken mother in London, whose daughter had phthisis, asking what the results of the new treatment had been. She had heard of it, and at her physician's suggestion had telegraphed. It is safe to say that within a month there will be a demand for rubber bags and Wolff's bottles such as has not been before in this country. All sorts of cases will receive the treatment, and while there may be great benefit in suitable subjects, there will be much bitter disappointment. Meanwhile a fortune awaits the clever charlatan who will open a Gas Institute, lay pipes to each bed, and advertise to cure consumption with one hundred injections. I would have distributed with each rubber bag a copy of Bishop Berkeley's "Siris" or "Philosophical Reflections and Inquiries concerning the virtues of Tar-water," which, as John Stuart Mill remarks, illustrates how great and seemingly conclusive a mass of positive evidence can be produced in support of a medical opinion, not borne out, except to a limited extent, by experience. Had there been a daily press to "boom" the great philosopher's *universal medicine*, he would have been able to found the college in Bermuda and carry out his schemes of civilization in the West.

A few weeks ago I spent a morning in Dr. Prudden's laboratory at the College of Physicians and Surgeons of New York, and was much interested in his studies on the bacteria of ice. He has collected samples from the various localities on the Hudson River and adjacent ponds from which the chief supply of New York is obtained, and by the culture method has isolated various forms of bacteria to the number of at least thirty. In three hundred analyses of ice taken at different times from the Hudson and its ponds, he found the average number of living bacteria for one cubic centimetre was 2033. In one sample of ice which was being distributed in a suburban district there were from 20,000 to 30,000 living bacteria to the cubic centimetre! It is quite possible that some of the forms found may be pathogenic; fortunately, however, he did not, in the numerous experiments, meet with the typhoid bacillus, which resists freezing for many days, and may retain its vitality in ice. These researches will prove most useful in causing greater care to be exercised in the collection of ice, and in checking, to some extent, the indiscriminate use of ice in drinking water.

Every one interested in heart disease should read Sir Andrew Clark's remarkable report in the *British Medical Journal* of Feb. 5th, 12th and 19th, on "Cases of valvular disease of the heart known to have existed for over five years without causing serious symptoms." He has tabulated 683 cases (from his private note-books), in which there were signs of valvular disease, the presence of which was not indicated by symptoms, and did not interfere with the general health of the individual. This extraordinary number he met with between 1873 and 1886 during the morning consultation hours, and he distinctly states that all doubtful murmurs and those in the pulmonary and tricuspid areas were rigidly excluded from the list. Insurance physicians will read these papers with interest and profit; and his conclusions should have widespread publicity, and, it is to be hoped, will lead to more correct views on the significance of cardiac murmurs. The following conditions, Sir Andrew holds, would justify a physician in permitting a patient, say, for example, with mitral regurgitation, to marry, to continue at his ordinary work, or to pass for life insurance: Good general health; just habits of living; no special liability to catarrhal or rheumatic affections; the origin of the valve lesion independently of degeneration; the existence of the valve lesion without change for three years; sound ventricles of regular action; sound arteries, free course of blood through the cervical veins, and freedom from pulmonary, hepatic and renal congestion. Here is comfort, indeed, for the poor victims of the stringent life insurance rules, which compel the rejection of every applicant with a heart murmur. The truth is, that the stethoscope in the hands of an imperfectly trained man is a most dangerous instrument, leading to all sorts of false conclusions. I fully believe that in the examination of any heart case a more correct judgment can be made by taking into account the general condition of the circulation and the evidence obtained by palpation and percussion than by relying exclusively on the auscultatory phenomena, as is so often done.

There is a lively row at Washington between Secretary Endicott and Surgeon-General Moore. On the retirement of Dr. Murray, a few months ago, Dr. Baxter was a prominent candidate for the position of Surgeon-General, and had the active support of the Secretary of War, Mr. Endicott. It is said that the President sent for Dr. Huntingdon, who is on duty at the Army Medical Museum, and on his representations Dr. Moore was appointed, although only fourth or fifth on the army list, in order of seniority. Shortly after this the Secretary of War relieved Dr. Huntingdon from duty at the Army Museum and detailed him to Los Angelos, appointing in his place a Dr. Greenleaf, who is stated to have been an earnest advocate of Dr. Baxter's claims. Surgeon-General Moore has protested against the carrying out of this order, as Dr. Huntingdon, from his long experience, has become almost indispensable in the work of the Museum. He has appealed to the President, whose decision the profession await with a good deal of anxiety. The feeling is very strong here that Dr. Huntingdon should not be removed, and those who know the good work which he has done in the Museum, and have experienced his kindness on their visits to it, are very indignant that he should be sacrificed for having expressed to the President his honest convictions.

Naphthalin is a remedy which does not seem to have the general use which its merits deserve. In certain forms of diarrhœa it seems particularly serviceable. In the case of a young man at the University Hospital who had had for many months a troublesome diarrhœa, except when upon a most restricted diet, naphthalin, gr. v, in capsule, five or six times a day, relieved the condition in a couple of weeks. It seems specially adapted to cases with flatulent dyspepsia and intestinal indigestion. In two cases of large bowel trouble it did no good. In the diarrhœa of phthisis it is useful, and Dr. Peabody of New York tells me that he has found it very advantageous in typhoid fever. A case of painful dyspepsia which had resisted the usual remedies, yielded in a short time to the capsules. It may be administered also in from 5 to 15-grain doses with charcoal and glycerine.

We have been sadly disappointed in Strophanthus, the new heart tonic. In cases of various forms of heart disease it has been practically without influence. We have used the tincture, of Burroughs & Wellcome and of Parke, Davis & Co. The dose, placed at from two to six minims, was increased to 25, and in one instance to 30 minims, without appreciable effect. In one pneumonia case it did seem to strengthen the pulse and lower the fever, but the patient was taking large doses of alcohol at the same time.

Antifebrin continues to prove a prompt and reliable antipyretic, and I see by the reports that it has been very satisfactory in the hands of those who have used it in London and Edinburgh. It seems to have some power also in controlling epilepsy. Dr. Weir Mitchell tells me that he has been using it with advantage, and I see that Lepine has recommended it in the lightning pains of tabes. In one of Dr. Mitchell's cases, taking grs. x, t.i.d., there was slight cyanosis.

The Philadelphia Orthopædic Hospital and Infirmary for Nervous Diseases opened a new building on the 19th ultimo—probably the most completely equipped special hospital in the country. The institution has always been well managed, and the Department for Nervous Diseases, under the fostering care of Dr. Weir Mitchell, has rapidly developed. To his kindness we are indebted for a complete outfit of apparatus necessary for the study of the morbid physiology of the nervous system. The accommodation is about 110 beds, including a number of private rooms.

WILLIAM OSLER.

CANADA
MEDICAL & SURGICAL JOURNAL

MAY, 1887.

Original Communications.

FAREWELL ADDRESS

DELIVERED TO THE GRADUATES IN MEDICINE AT THE ANNUAL CONVOCATION OF THE MEDICAL FACULTY OF McGILL UNIVERSITY, MARCH 29TH, 1887.

BY F. BULLER, M.D., Professor of Ophthalmology, McGill University.

Gentlemen Graduates :—In commencing, I will give you a few original lines of poetry—at least they were original some time ago. (Laughter.)

> "The lives of great men all remind us
> We can make our lives sublime,
> And departing leave behind us
> Footprints on the sands of time."

The author of these lines, great himself in the possession of a truly noble nature, as well as of the heaven-born gift of poetry, has left us many footprints of his own engraven, not in the sands of time, but cut deeply in the trunk of the thriving young tree of American literature. A tree which is destined to spread its branches and expand its foliage not only over the length and breadth of this broad continent, but east and west across the wide oceans and around the circle of the civilized world. A tree which in time must bring forth the best of fruit, because it has been grafted from the very best stock of the greatest nations of Europe, just as these are the literary scions of ancient Greece and Rome. But we may go a step further in the same direction and, I think, safely predict a brilliant future for art and science in this Western world. By and by the physical and mental energy that has placed America in the front rank in all that pertains to practical and applied science will surely develop its latent powers in the direction of the higher forms of culture. Year by year, with the accumulation of wealth and the extension of facilities for the acquirement of higher education, we are gradually approaching an era of intellectual life which will in all probability transcend that of the present day, as this does the intellectual life of the dark middle ages. In the growth of this wonderful tree of knowledge—literature, art and science—let us hope, and I think we have good reason to expect, that some of its thriftiest branches and some of its richest fruit will be found springing from Canadian soil. The good seed is sown in thousands of common schools throughout the land; here we see the swelling buds—youthful minds in the spring of life drinking in the vernal sap of knowledge. In our higher schools and colleges the tender leaves have become unfolded, and in our universities the choicest buds have burst forth into full bloom. In this last cast category belong all our undergraduates, and some of them, I am sure, are blossoms of great beauty and promise. But you, gentlemen of the graduating class, who are here to-day to say farewell to your Alma Mater, you have now advanced a stage further; you have shed the petals and are now the young and tender fruit. As such you are about to be exposed to trials and difficulties of a different order to those that have hitherto beset you. Now the cold bleak winds of distrust and worldly indifference will have to be faced, a blighting influence that works discouragement in many a sensitive nature, and one which weighs especially heavily upon our profession. For some of you there will be a long and weary period of waiting for work that you have carefully prepared yourselves to do, and which you feel you ought to be doing, but it will not come to you. With this period of enforced idleness you will be exposed to a thousand temptations that ever beset the unemployed. This is the time when much of the young fruit is stung with the busy moth of vice and intemperance, cankerworms which, once having penetrated the pericarp of the human soul, rob it of all proper nutriment, blighting all its noble powers of development, so that the withered fruit drops early from its stem and sinks forgotten into the abyss of eternity. This is the time when, grown restive of long delay, some may be tempted by the hope of speedy reward to actions which pave the way to ruin and disgrace. Would any of you obtain the love and respect of your fellow-men ? Believe me, there is but one sure way to attain your object, and that is to remain steadfast in the good resolves you all will make at the outset of your career. Be not faint or weary in well-doing. Above all, do not imagine that the time and attention you bestow upon the poor and needy who come to you for relief is labor and time thrown away. It is bread cast upon the waters which will surely return to you after many days. In every occupation in life all men should study attentively the sayings and doings of illustrious ones who have trodden the same paths before. For this reason I have looked up the records of some great names in British medicine, men with whose names and great deeds you are all more or less familiar, and if you will kindly bear with me for a short time I will endeavor to give you a few brief results of my researches in this direction. Aikin, in his Biographical Memoirs of Medicine in Great Britain, speaking of Harvey, says: "The private character of this great man appears to have been in every respect worthy of his public reputation. Cheerful, candid and upright, he was not the prey of any mean or ungentle passion. He was as little disposed by nature to detract from the merits of others or make an ostentatious display of his own as necessitated to use such methods for advancing his fame. The many antagonists whom his renown and the novelty of his opinions excited were, in general, treated by him with modest and temperate language, frequently very different from their own ; and while he refuted their arguments he decorated them with all due praises. He lived on terms of perfect harmony and friendship with his brethren of the profession, and seems to have been very little ambitious of engrossing a dispropriate share of medical practice. To complete his character he did not want in that polish and courtly address which are necessary to the scholar who would also appear as a gentleman." Of Thomas Sydenham it has been said: "What Harvey and Newton did for the sciences of inorganic matter Sydenham did for the art of healing and of keeping man whole ; he made it in the main observational." His nobleness of character is best illustrated by an extract from his own writings. He says: " In all points of theory where the reader finds me in error I ask his pardon. In all points of practice I say that I speak nothing but the truth, and that I have propounded nothing except what I have properly tried. Verily, I am sure that when the last day of my life shall have come upon me I shall carry in my heart a willing witness that shall speak, not only to the care and honesty with which I have labored for the health of both rich and poor who have entrusted themselves to my care, but also to those efforts which I have made to the best of my power and with all the energies of my mind, to give certainty to the treatment of diseases even after my death, if such may be. In the first place, no patient has been treated by me otherwise than I would myself wish to be treated under the same complaint. In the second, I have ever held that any accession whatever to the art of healing, even if it went no further than the cutting of corns or the curing of toothaches, was of far higher value than all the knowledge of fine points and all the pomp of subtle speculation—matters which are as useful to the physicians in driving away disease as music is to masons in laying bricks." In another place he says, " I have always thought that to have published for the benefit of afflicted mortals any certain method of subduing even the slightest disease was a matter of greater felicity than the riches of a Tantalus or a Crœsus." Again he says, " My fame is in the hands of others. I have weighed in a nice and scrupulous balance whether it is better to serve men or to be praised by them. I prefer the former. It does more to tranquilize the mind ; whereas fame and the breath of popular applause is but a feather, a bubble, and a dream. Such wealth as fame gives, those who have scraped it together and those who value it highly are fully free to enjoy, only let them remember that the mechanical arts (and sometimes the meanest of them) bring greater gains and make richer heirs. A hundred and fifty years ago William Cullen gave advice to a young man just starting out in life which any young man would do well to take heed of to-day. He says: "Study your trade eagerly, decline no labor, recommend yourself by briskness and diligence, bear hardships with patience and resolution, be obliging to everybody, whether above or below you, and hold up your head both in a literal and figurative sense." Of Benjamin Brodie it is said: "It was impossible to see him acting in any capacity without instinctively feeling that he would do his duty and do it well." Nor could he be imagined in a false position. A gentleman, according to his own definition of the word, he did to others that which he would desire to be done to him, respecting them as he respected himself. Simple in his manners, he gained confidence at once; accustomed to mix with the poorest in the hospital and with the noblest in private abodes, he sympatnized with the better qualities of each —valued all and despised nothing but moral meanness. Richard Bright is said to have been remarkable for consideration towards the failings of others, but severe in the discipline of his own mind. He was sincerely religious both in doctrine and in practice, and of so pure a mind that he never was heard to utter a sentiment or to relate an anecdote that was not fit to be heard by the merest child or the most refined female. Of Liston we are told that he never had a patient that was not anxious to become a friend, and a voice which was sometimes discordant amid the petty annoyances of daily life was music to the sick man's ear. Into the scene of suffering he never brought a harsh word or an unkind look, and the hand which was hard as iron and true as steel in the theatre of operation, was soft as thistle-down to the throbbing pulse and aching brow. But we need not go beyond our own university and school for bright examples of nature's noblemen, some of whom have only been taken from us within a recent period. Such were William Sutherland, George W. Campbell, and, later still, one who had a special gift of endearing himself to all who had the good fortune to know him; few of you, perhaps, knew him personally, but I am sure all who did will agree with me there never was a nobler nature than that of Dr. Joseph Drake. A large-souled, genial man, possessed of a refined and cultured intellect, he has left in the minds of all his confrères an impression of loving regard such as few can inspire, and which they will carry with them to the end of their existence here and, perhaps, renew in the infinite beyond. Such were a few of the men who have adorned the medical profession in the past, and I could give you many similar examples of illustrious lives worthy of your emulation. I do not know exactly why, but the world seems to expect all those who have adopted the profession of which you now are members, to be above the vices and failings of ordinary mortals, and in this, as in everything else, the nearer you can come to the world's ideal the greater will be your success in life. On the duties and responsibilities you are about to undertake, perhaps the words of Sydenham on this subject, though spoken long ago, are as appropriate as I can find. He says: " Whoever takes up the profession of medicine should seriously consider the following points: Firstly, that he must one day render to the Supreme Judge an account of the lives of those sick men who have been entrusted to his care. Secondly, that such skill and science as, by the blessing of God, he has attained, are to be especially directed towards the honor of his Maker and the welfare of his fellow-creatures, since it is a base thing for the great gifts of Heaven to become the servants of avarice or ambition. Thirdly, he must remember that it is no mean, ignoble animal that he deals with. We may ascertain the worth of the human race, since for its sake God's only begotten Son became a man, and thereby ennobled the nature that He took upon Him. Lastly, he must remember that he himself hath no exemption from the common lot, but that he is bound by the same laws of mortality, and liable to the same ailments and afflictions with his fellows. For these and like reasons let him strive to render aid to the distressed with the greater care, with the kindlier spirit, and with the stronger fellow-feeling."

CHRONIC NASAL CATARRH—ITS NATURE AND TREATMENT.*

By George W. Major, B.A., M.D., &c.,

Late (1877) Clinical Assistant, Hospital for Diseases of the Throat and Chest, London, Eng.; Fellow of the American Laryngological Association: Specialist to the Department for Diseases of the Nose and Throat, Montreal General Hospital; and Instructor in Laryngology and Diseases of the Throat, McGill University, Montreal.

Chronic nasal catarrh or chronic rhinitis is commonly met with in three distinct and separate stages. The first is simple chronic Rhinitis, the second Hypertrophic Rhinitis, and the third Atrophic or Fetid Rhinitis.

Simple chronic rhinitis is simply an inflammation of the nasal mucous membrane that has lasted some time, entitling it to be considered chronic. It is usually the result of a single attack of acute rhinitis, or of a number of acute attacks which have resisted Nature's spontaneous cure. Simple chronic rhinitis is not uncommon in infancy, in extreme age, and in cachectic persons. This condition may be recognized by the general redness of the mucous membrane lining the nasal chambers, and is, as its name implies, unassociated with structural changes of any kind, if we except a softened and diminished contractile power of the vessel walls, the result of oft-repeated and continued distension. The amount of swelling varies with the individual and modifying circumstances. The pharynx is commonly implicated, and laryngeal extension is not infrequent. After this simple form of chronic rhinitis has lasted for some time it gives rise to structural changes, the products of inflammation become organized, and connective tissue is formed in the mucous membrane proper as well as in the submucous layer. The walls of the veins become thickened and remain in a constant state of distension, causing a general increase in the amount of blood present, with the usual results. The glands of the nasal passage become involved, and the nasal secretion becomes thick and tenacious. Gradually the turbinated bones participate in this state and overgrowth of the osseous tissue is the result.

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* A clinical lecture delivered at the summer session of McGill University in the Clinic for Diseases of the Nose and Throat, Montreal General Hospital, April 21st, 1887.

It is only when the breathing becomes much obstructed by the occlusion of the nasal chambers by the now hypertrophied turbinated bodies that relief is applied for. These bodies usually are red, but may be pale in color; on pressure with a probe they pit, but on withdrawing the pressure they return to their former shape. They may be so enlarged as to impinge upon each other, producing obliteration of the meatus or may exert such decided pressure upon the septum as to produce severe discomfort, if not actual pain. Meantime the secretions accumulate, the drainage of the nose is seriously interfered with, and the already unhealthy state of the chambers is further aggravated. The greatest enlargement occurs in the lower turbinated body, which becomes particularly hypertrophied at its anterior and posterior extremities, with usually an excessive development of loose tissue on its lower surface dipping into and obstructing the inferior meatus. This last condition interferes with proper aeration of the inner ear and causes accumulation of secretion on the floor of the nose, which flowing backwards gives rise to the uncomfortable dripping so often complained of by patients suffering from this annoying but curable condition. The posterior hypertrophy occurring in a region particularly rich in vascular tissue of an especially erectile character, becomes the source of much annoyance to the patient, and is aggravated when in the recumbent position. The middle turbinated body generally develops a spongy growth on its anterior face, and not infrequently shuts off the olfactory region from contact with odoriferous particles, producing a temporary loss of the sense of smell, besides becoming the focus for the accumulation of foreign bodies intimately commingled with the unnaturally adhesive secretions.

The pharyngeal vault becomes by extension very much congested, and its glandular tissue takes on proliferative action, further embarrassing nasal respiration, which necessitates the baneful practice of mouth breathing.

The buccal pharynx is also, in the natural order of things, involved, the mucous lining undergoes retrograde changes, and follicular disease is established, with an almost certain extension to the larynx. Healthy respiration and digestion are interfered with, and the general health suffers.

The third form of this disease—atrophic or fetid rhinitis—follows in the wake of the second or hypertrophic stage. The length of time required for the development of this wasting varies very much; it may develop rapidly, slowly, or not at all. It is not unusual to find far advanced wasting catarrh in a child of six or eight years of age, and it may occasionally be encountered much earlier in child life. It is not unusual to find the disease much further advanced in the vault and pharynx than in the nose, or to have a different stage of development in each nasal chamber. Fortunately this form of nasal catarrh is not as common as the hypertrophic variety. Now how does this wasting occur? We have already seen that in the second stage or that of hypertrophy an amount of connective or elastic tissue is deposited in the deeper tissues of the turbinated bodies; and we have also ascertained that the stage of atrophy may occur early or late in the course of hypertrophy. To put it plainly, the atrophy is the result of pressure. When atrophy occurs early it is directly the result of the crowding of the glands, etc., produced by the newly-formed tissue deposits; and when occurring later on, it is the result of the pressure produced by the contraction of the elastic and connective tissue in course of organization. This is the simplest explanation, and the one generally accepted. The turbinated bones themselves undergo absorption, and frequently disappear altogether. This process is brought about by the pressure just now alluded to, aided by the pressure of dried secretions on their surface. The natural result of this wasting disease is abnormally large and spacious nasal chambers lined with dry red and shining mucous membrane, covered with crusts of inspissated secretion of a yellow or greenish-yellow color. Under these crusts the secretions are poured out, and having no means of escape, they undergo gradual decomposition and aggravate the already unhealthy local state. On breaking or attempting the removal of one of these scales, the unpleasant odor of the patient's breath is very much intensified. The secretions in this stage of the disease are very scanty and lack liquidity, tending to accumulate at favorable points. The sense of smell is usually impaired, if not lost, the result, no doubt, of implication of the olfactory filaments in the general waste. As the disease advances the fetor increases, when fetor becomes really an index of long standing disease.

Now under the head of nasal catarrh or rhinitis, let us review what we have attempted to describe.

Chronic nasal catarrh was divided into the three great progressive stages in which it is met with in actual practice. It does not follow that all these stages are developed in each case, for we are fortunate to be able to cut short the disease in its early stages. The three stages named are—1, Simple Chronic Rhinitis; 2, Hypertrophic Rhinitis; 3, Atrophic Rhinitis.

There are an endless number of synonyms used to express these conditions; these have been avoided, as they only would tend to confusion. The division given you is simple and, above all, practical; it represents to you the disease as it is and as it will present itself to you, and as you must recognize it in order to correctly diagnose or prognose, or successfully treat it.

You will observe that I have avoided mentioning all the multitude of complications that beset an ordinary case of nasal catarrh. I have not mentioned deviations of the septum, simple sigmoid or multiple, nor exostoses, nor ecchondromata, nor polypi, nor tumors, nor vegetations of any kind. These will all be dealt with hereafter. I have described so far simple, uncomplicated, non-specific chronic rhinitis, and shall now proceed to the treatment appropriate to the different stages.

Before doing so, however, it may be well to briefly refer to a few points in the general or constitutional treatment of these cases applicable to any stage of the disease. In the first place, remove, if possible, the cause, whatever it may be, if you are so fortunate as to find it out. The occupation may have something to do with the production of the disease, or the habits of life, or some constitutional dyscrasia, or some diathesis. Improve the general health, as far as possible, by administering suitable remedies. Pay particular attention to frequent bathing of the surface of the body and other hygienic measures. Stop the use or abuse of alcohol, as tending to congest the vessels of the head. In the specific treatment of this disease by internal remedies, you need not look for much, if any, return. Cubebs I have found occasionally serviceable, but not to the extent of being a specific by any means. The disease usually is local, requires local treatment, and in local improvement you will have a general constitutional gain.

The principle of cleanliness so essential to the success of modern surgical measures is most essential in this disease. Whether cleanliness be obtained by simply blowing the nose with the handkerchief, or by some liquid capable of clearing the nasal chambers of accumulated secretion by virtue of a solvent action, it matters not, so long as the desired end is attained. Some judgment is necessary, however, in the selection of proper ingredients for the composition of these local washes, and particular care should be devoted to securing a proper density.

Many of you have doubtless observed that at my clinic in this hospital I very frequently order a cleansing solution. This solution is composed of—Carbolic Acid, No. 1, Calvert's, gr. i; Borax, gr. iii; Sod. Carb., gr. iii; Glycerine ʒi; Water, ʒvii, and is the Collunarium Boracis of the Pharmacopœia of this hospital.

Now, it will not do to let you suppose that the cure of this disease consists in simple cleanliness. Cleanliness is essential to a cure, but is not curative in itself. Of what value would any medicated application be if applied over a layer of adhesive mucus or over an indurated varnish-like pellicle of secretion. The application intended to cure would never reach the diseased surface and your treatment would be a failure, and you would ignorantly condemn the means employed as useless—little thinking that it was your *modus operandi* that was at fault. Now as to the way in which these cleansing solutions should be used. A syringe should seldom be employed, as the liquid enters the nasal chambers in a stream, with more or less violence, and does not reach all the nooks and corners that most stand in need of being cleared. The force of the stream is very likely also to abrade the delicate and sensitive Schneiderian membrane or to produce more or less swelling by its impact. The nasal douche should be resorted to even less than the syringe. It is occasionally useful, however, in bad forms of wasting catarrh, especially if advanced in character (fetid), to remove the hardened crusts and scales that accumulate in such abundance in this advanced and obnoxious form of the disease. Certain rules are essential for guidance in the use of douches, and if carefully observed, the harm that accrues from their use is somewhat modified. The douche should be raised but slightly above the level of the patient's head so as to give as little force as possible, merely pressure sufficient to cause the liquid to flow. During the use of the douche the patient should avoid the tendency to swallow ; breathing should be conducted through the open mouth, and no attempt at speaking should be made.

The special danger attending the use of the douche is the tendency of the liquid to enter the Eustachian tube and possibly give rise to serious ear complications. Too much pressure will produce severe headache and inflame and abrade the nasal lining membrane. A douche, then, is only admissible in the last stage of chronic nasal catarrh, and is here employed to wash away crusts that the patient could not otherwise rid himself of. A large quantity of liquid is usually necessary, and should be employed warm, as, indeed, should all nasal lotions or sprays. Cold liquids used in the nares tend to develop neuralgia of the face, and are to be avoided in consequence. The method of cleansing the nostrils carried out by patients attending my clinic for diseases of the nose and throat is simply to snuff the liquid from a wine-glass and clear the nose by gently blowing with a handkerchief. You notice I say " gently blowing." Violent blowing of the nose produces an excessive flow of blood, with accumulation in the venous sinuses, and is, moreover, liable to do injury to the ear if persevered in. This means of applying by " snuffing" is I find quite as effectual as the use of an atomizer. In private practice I prefer an atomizer however, as more likely to disseminate the fluid throughout all the nasal sinuses, and perhaps more elegant. The atomization of liquids is free from many of the objections urged against syringes and douches ; a less quantity of liquid is needed, and as it is in a very fine state of division it enters every region possible.

Before proceeding further with the consideration of cleansing solutions, let me call your attention to the popular abuse of salt used in solutions. I will not say there is nothing worse—for there is--and that one thing is simple water used at any temperature. The membrane of the nose is hygroscopic or capable of absorbing moisture, and that tendency is increased when in contact with a liquid of low specific gravity; the result is that the vessels become loaded, the membrane tumefied, and the surface irritated. A solution of salt in water is not, if of proper density, subject to this grave disadvantage, but it relaxes the membranes in time and produces a genuine nasal catarrh where possibly none previously existed. When speaking of atomizers, it will be well to recommend an instrument that will be found serviceable, and not likely to get out of working order. In the Burgess' atomizer you will find everything that you can desire. I have ordered for the past two or three years no other instruments, and have every reason to be perfectly satisfied with their behavior. They may be obtained with an up, down or straight stream, and are practically indestructible. They require, like all delicate instruments, occasional cleaning with hot water. In addition to the formula for a cleansing solution already given, I frequently modify it by omitting the bicarbonate of soda; by using borax and sod. carb. alone, with water; by substituting muriate of ammonia in less quantity for either or both. I likewise order a spray containing fluid extract of Pinus Canadensis (instead of carbolic acid), and find it answer very well in some cases. The value of a spray in each case can be well judged by the feelings of the patient, not at the time of using, but after an interval of an hour or two.

Insufflation of medicated powders are also employed in chronic nasal catarrh. I employ only two formulæ. The first is—Iodoform, one part by bulk; Boracic Acid, seven parts by bulk, finely powdered and used with an insufflator. The second formula is—Iodoform, ʒi; Pulv. Benzoin, ʒvii, finely powdered. The first is simply antiseptic and the latter combines antisepticism with stimulating properties.

Before proceeding to speak more particularly of the treatment most applicable to each one of the three forms of chronic nasal catarrh, I wish to say right here that my individual experience of the disease leads me to place very little confidence in any of the various methods of local medication set forth as cures for chronic nasal catarrh. Palliatives they may be ; radical cures they certainly are not. It will not do to ignore local medication, as it no doubt assists surgical measures, but in the latter method I look for and obtain good, satisfactory and permanent results.

In simple chronic rhinitis, uncomplicated by any other abnormal condition, I usually order a cleansing spray to be used the last thing at night before retiring and the first thing in the morning on rising. This must be persevered in for some weeks ; gradually the membrane will appear less red and less swelled, and may possibly entirely recover. Usually these cases improve up to a certain point and then hang fire completely. I usually then undertake some superficial scoring with galvano-cautery knives, whereby the superficial circulation is reduced to such an extent that the case quickly and permanently recovers. I say permanently, as the tendency to inflammatory action is reduced and the parts are rendered less susceptible to weather influence. These operations are absolutely painless, as they are done under the local use of a four per cent. solution of Merck's cocaïne. My method of proceeding is as follows : After clearing the nostrils of any adherent or accumulated secretion by means of atomization, I dry the surface to be operated upon with a small pledget of absorbent cotton carried on a suitable probe. I then apply the cocaïne to the part on which I am about to operate with a brush or pledget of cotton, after having first sprayed the nasal chamber so as to diminish the general sensibility. When contraction has taken place, and the membrane is somewhat paler, I test the parts with a probe to ascertain if sufficient insensibility has been produced. I then pass in the knife through a nasal speculum, and having arrived at the farthest point I intend reaching, I turn on the current and draw the knife steadily and slowly forward ; having reached a point forward beyond which I do not wish to go, I shut off the current and withdraw the knife cold. I make it a point never, unless under very exceptional circumstances, to operate on both nostrils at the same sitting. It is well to preserve one nostril for respiratory purposes. After completing the operation I dress the wounds with sublimated wool, and am careful not to put in too large a piece nor to pack it too tightly. I find when the latter precaution is omitted that the absorption of moisture by the wool increases the bulk to such an extent as to exert pressure sufficient to produce severe headache. This dressing I change in 48 hours, and may or may not replace it by a second one. In 96 hours the wounds are healed, when we can safely operate on the remaining side, and so on. The scoring as carried out in simple chronic rhinitis is, as I stated, superficial, and is best done with knives made of round platinum wire and at cherry-red heat.

In the hypertrophic variety deep wounds are necessary; a sharp spatula knife, therefore, is to be preferred, and the temperature of the knife requires to be higher.

In the atrophic variety, galvano-cautery should be used as a stimulant to the general surface, and when used, you will find it better than Galanga, Sanguinaria Canadensis *et hoc genus omne.* In wasting diseases I proceed somewhat differently. I apply the flat of a specially constructed and large sized spatula to the bones generally. I observe the exact spots where collections occur; these regions I score thoroughly and destroy glandular masses that are here situated, with the happiest results. This atrophic stage is incurable; by incurable I mean that it is not radically curable, and why? For the simple reason that wasting has taken place. Parts essential to the health of the region are wanting; they are not there, and we cannot put them there. We can destroy, but we cannot always restore. So much improvement follows this method in the last stage that a little care on the part of the patient will be sufficient to keep the chambers in a comparatively healthy and pleasant state. By care I mean cleanliness, for in this stage it is of all means the most essential. The secretions lack fluidity, they cannot drain away, and hence crust and dry up, becoming centres of decomposition. Then wash them away. Time and patience are required, but it is not spent in vain.

There are other methods of a surgical nature to which it is necessary to refer.

The actual cautery is always available, and if carefully handled is no doubt efficacious. It is, however, a rude means to an end, and personally I have no experience of it.

The thermo-cautery is a clumsy appliance for nasal purposes, and rests under the great disadvantage that it requires to be introduced into the nasal passage red-hot. Its action cannot be properly controlled, and it is liable to destroy a large extent of surface. It is not suitable for nasal purposes, and is at best a makeshift.

Chemical agents are occasionally useful, and sometimes to be preferred.

Of the latter class I may mention fuming nitric acid, glacial acetic acid, and chromic acid ; and I name them in the order in which they are to be preferred. In employing acids, some precautions against possible accidents are necessary. First cleanse the nasal chamber thoroughly before applying the solution of cocaïne. When local anæsthesia has been produced, proceed to prepare your applicator. Take a metal probe with a roughened end, or, better, a vulcanite acid carrier, if you happen to have one, and wrap the end lightly, but tightly, with absorbent cotton. When properly secured, dip into the acid and squeeze out any excess of acid by pressing the probe against the side of the glass. Introduce your nasal speculum and pass in the probe, exerting a pressure against the part requiring contraction, rotating the instrument on its axis to secure thorough contact. Now withdraw and quickly spray the parts with a saturated solution of bicarbonate of soda, which you have ready at hand. This last-named procedure neutralizes any excess of acid and prevents unnecessary destruction. Then dress the wound as after the galvano-caustic method. I also should state that it is well to direct the patient when the acid is *in situ* to inspire through the mouth only, then shut it and expire through the nose, repeating as often as necessary. This will effectually prevent the entrance of the fumes into the throat and avoid the awkward complication of coughing or sneezing. If you saturate the acid with cocaïne it will also diminish the pain of the application. Acids are only available for use in the anterior area of the nasal chambers, as, if applied in the back part of the nose, they would not be under proper observation or control. If the head be somewhat inclined forward the flow will be in the same direction, and an additional precaution against any accident will have been taken.

Nitric I prefer to any other acid. Glacial acetic I have used, but failed to find it possessed of any advantage over the first named. Chromic acid I do not recommend, as it is difficult to control and is not clean. Nitrate of silver is too stimulating, too superficial in its action, and as a destructive would require to be repeated too often. It is not to be recommended. The cold wire snare is available in cases of hypertrophy, when there is sufficient redundancy of tissue to enable you to secure a grip. It is specially useful, in fact indispensable, in hypertrophies of the posterior end of the lower turbinated body. The loop of wire, to which a proper outward curve has been given, is passed along the nasal chamber, and when the overgrowth is engaged in its embrace, the wire is drawn home and the mass severed thereby. Cocaïne cannot be used in the last-named operation, as its use will frequently cause the temporary disappearance of the tumor, only to return again in a few minutes. When skilfully performed, the operation is speedy and not very painful. Considerable bleeding, occasionally lasting for several days, may succeed this operation, but it is not likely to be serious. If you direct the patient to keep the head erect, you will probably avoid this annoyance. If the patient finds it necessary to expectorate, do not allow the head to be inclined forward in the least. This rule holds good in all cases of bleeding from the nose. Whether bleeding occurs or not, take the precaution to plug the nasal passage on which you have just operated with a little cotton wool to prevent breathing on that side, as breathing tends to prevent the formation of a clot. The cold wire snare is also available in hypertrophies occurring on the anterior face of the middle turbinated body and on the lower margin of the lower bone.*

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* This lecture was profusely illustrated by living subjects, and the various surgical operations detailed were performed in the presence of the class.

The improved angular nasal snare and écraseur introduced by the author is especially adapted to the needs of the general practitioner, possessing many advantages over the straight instrument ordinarily used by specialists.

After the removal of hypertrophies by the means above referred to, you will find that there will be no redevelopment; in other words, the cure is radical. Many of these operations, simple though they appear, require far more than the average skill of the general practitioner, and are best referred to those whose opportunities best fit them for the work, when such persons are available.

You will observe that I have here carefully confined myself to the consideration of simple chronic nasal catarrh, free from complications, and these remarks are to be so considered.

TRAUMATIC SUPPURATIVE MENINGITIS.

By W. A. DeWolf Smith, M.D., New Westminster, B.C.

On Thursday, March 17th, '87, I received an order from the Police Magistrate to make a post-mortem examination of the body of a Chinaman. The previous history of the case, as given me by Dr. Cooper, is briefly as follows:—

On Monday, Feb. 21st, Dr. Cooper was called to see a Chinaman who had been hurt, and was taken to a building used as a Chinese gambling-house, where he found a man lying on the floor, bleeding profusely from a wound in the forehead. On examination, a wound over the left eye, about an inch in length and reaching to the bone, was seen. Over the right parietal bone a severe contusion was present, which presented clearly defined edges, and over the occipital bone was another contusion. The man, when first seen by Dr. Cooper, was unable to move or speak. His friends being unwilling that he should stitch the wound, he contented himself with cleansing it and drawing the edges together by a couple of strips of rubber plaster. The man recovered his senses, and when seen by Dr. Cooper a couple of days after the row, was able to walk about. In another day or so he was again seen by Dr. C., who found that a "chemical doctor" had visited him, had taken off the plaster, and stuffed the wound full of a powder for which they claim considerable virtue. Dr. Cooper thereupon intimated his unwillingness to co-operate with the Chinese doctor, and did not see the man again until a day or so before his death, when he again cleansed the wound and drew the edges together with plaster. Notwithstanding, the man died on the 14th March, three weeks after receiving the injury.

On the 17th of March, then, I was required to make a post-mortem examination of the body of a Chinaman, Lim Bos. I found the body on the floor of the Chinese hut, where he had died. It was fully clothed. On stripping the body it was seen to be that of a Chinaman of a little more than the average height, well-proportioned and well-nourished. His age was said to be thirty-six. The front of the neck, part of the chest and sides, and the back were discolored in places from post-mortem staining. The abdomen was distended and tympanitic. In each groin were patches of greenish discoloration. On the forehead were two strips of adhesive plaster, and when these were removed an open wound was visible. It was about one inch in length, and commenced at a point two and a half inches above the inner canthus of the left eye, and extended in a direction outwards and a little upwards. With a probe, bare bone could be felt through its whole length. There was a slight bloody discharge from the nostrils.

A crucial incision having been made in the scalp, it was reflected, a considerable quantity of bloody serum being underneath. Over the whole frontal bone the periosteum peels off easily, and over the left frontal bone surrounding the situation of the above-mentioned wound the periosteum is entirely absent. The edges of the wound on the inner surface of the scalp show signs of inflammation, and are very unhealthy looking. Above, and communicating with the orbit of the left eye at its external angle, is an abscess containing about half an ounce of pus. Over the right parietal bone there was a large contusion.

The skull-cap having been removed, the membranes were found to be not adherent at any point, and a little dark blood, which came from a tear in the longitudinal sinus, escaped. The vessels of the dura mater were much congested. On the interior of the cranium the sutures were particularly well marked. No crack or fracture was visible beneath the site of the wound, either on the exterior or interior of the frontal bone. A large quantity of purulent matter was spread over the dura mater, beneath the site of the wound, and for some distance around. The membranes over the whole left anterior lobe were much thickened, except at a point immediately beneath the site of the injury, where they were absent. Beneath the membranes, bathing the whole of the anterior lobe, was a large quantity of pus.

Brain removed. Between the under surface of the left posterior lobe, of the cerebrum, and the adjacent surface of the cerebellum, was a moderate quantity of creamy pus. Otherwise the base of the brain and the arteries of the base were healthy. Over the anterior three-fourths of the upper surface of the left hemisphere there was an intense degree of inflammation, and in places the membranes were adherent to the brain. Along the middle two-fourths of the convolution of the longitudinal fissure on the right side there were evidences of a lesser degree of inflammation. The hemispheres were adherent along the whole extent of the great longitudinal fissure from inflammatory exudation. The lateral ventricle of each side contained a small recent blood-clot. The right hemisphere was of normal consistence. The anterior portion of the left hemisphere was softened by inflammation to the depth of about half an inch. The cerebellum appeared normal. The fourth ventricle was empty.

On opening the abdomen, the bowels, much distended with gas, came immediately into view. On the left side there was a hernia of the omentum into the scrotal sac—evidently of old standing, as it had become adherent to the bottom of the sac. There was no other evidence of disease, inflammatory or otherwise, about the abdomen. In the thorax the heart was free from any signs of disease, and the valves were normal. The lungs were not adherent to the chest wall at any point, and were, in fact, quite healthy.

REMOVAL OF A NUT-SHELL IMPACTED IN THE LARYNX.

By George W. Major, B.A., M.D., &c.,
Specialist to the Department for Diseases of the Nose and Throat, Montreal General Hospital; Instructor in Laryngology and Diseases of the Throat, McGill University, Montreal, Canada.

On Monday, April 11th, Dr. Roddick referred an infant of eleven months in whose larynx a portion of nut-shell had become lodged a couple of hours before. The child was suffering from very difficult breathing, and was altogether in a very critical condition. An attempted examination with the laryngoscope proved a failure owing to swelling and a continued state of spasm. On passing the finger into the larynx an irregular body was found in the posterior commissure of the larynx, firmly held between the vocal cords, then in a state of spasm. An attempt at removal with forceps of many sizes and patterns proved fruitless, as the small size of the passage would not allow of the opening of the blades. Before deciding upon tracheotomy, I took an ordinary laryngeal probe and bent its tip outwards at a right angle. After finding the body with the forefinger of the left hand, I introduced the probe bent as described between the vocal cords and in front of the shell, and pressing upwards and backwards, succeeded in dislodging the body and carrying it into the upper pharynx. On turning the child on her face, the body was ejected and breathing restored. On the following day some slight hoarseness remained and the sputum was tinged with blood. No other untoward result was observed.

Correspondence.

HEREDITY.

To the Editors of The Canada Medical & Surgical Journal.

Dear Sirs,—When Dr. Johnston's paper on "Heredity," published in the April number of this Journal, was under discussion in the Medico-Chirurgical Society of this city, I suggested that medical men might possibly be able to throw some light on that part of Prof. Brooks' theory of heredity which refers variations to one parent rather than the other, viz., to the male. By way of starting discussion on this subject, I beg to refer to a communication in *Science* for August 20th, 1886, in which Prof. Joseph LeConte reports a case of inherited polydactylism, which he renders clear by the following diagram :—

Maternal Grandfather. *Maternal Grandmother.*
Father. *Mother.*
(Case Reported)—*Peter Weitner.* Sisters. Brother.
a, b, c, d. a.
Children.

It is seen that the deformity was inherited from his mother's maternal grandmother ; that, besides himself, it has affected one sister out of four, and one brother, and has been transmitted to the children of the sister, thus affecting at least four generations. Besides, it will appear that the peculiarity began on the *female* side and descended first along that line, and affected, on the whole, as many females as males.

According to Prof. Brooks, variations *originate* with the male. His view has been much disputed, and it seems important to determine whether it be true or not, for if so, many momentous practical conclusions will flow from it. This single case is against the theory.

Hoping that this communication will stimulate others of your readers to communicate cases, bearing on the theory, that they have met either in reading or in practice,

I am, yours truly,
T. Wesley Mills.

McGill College, Montreal, April 23rd, 1887.

Hospital Reports.

Medical and Surgical Cases Occurring in the Practice of the Montreal General Hospital.

Excision of Tongue, with preliminary Ligature of the Lingual Arteries. (Under care of Dr. Shepherd.)

(Reported by Dr. A. W. Campbell, Acting House-Surgeon.)

Thomas T., aged 63, laborer, was admitted to hospital on December 1st, 1886, complaining of a painful sore on his tongue.

History.—Patient states that he has always been a healthy man, with the exception of an attack of yellow fever many years ago. Knows of no ill health among any members of his family. Father and mother died, aged respectively 64 and 72. He has been a sailor in the U. S. navy. Last February he obtained employment in an oil-house on the C. P. R. at Chapleau. He lived there in comfortable circumstances with his family. Has never used alcohol nor tobacco in excess, but has been in the habit of smoking an old wooden pipe, which he held on the left side of his mouth. Lost some teeth on that side ten years ago, but has had no trouble with his teeth lately. About the first of May last he noticed a small ulcer on the edge of the left side of the tongue, about half an inch from the tip. This became larger and painful, and on going to a doctor he was given a gargle which, he says, took the skin all off his mouth, blackened his teeth, and made his tongue worse. The ulcer continued to grow in size and the pain increased. He began to lose strength and flesh, and could not eat solid food on account of the pain. Continued to work until a few days ago, as his work was not hard, when he was advised to enter the hospital.

Present condition.—Patient is a well-built, intelligent man, thin and weak, having lost 20 lbs. since last May. His appetite is good. The ulcer extends along the left edge of the tongue, from the tip to opposite the last molar teeth, and also on the dorsum of the tongue. The surface of the ulcer is irregular, depressed, and sloughy, the edges ragged and everted, and the base firm and indurated. A second ulcer, oval and more deeply excavated, is situated on the middle of the dorsum of the tongue, about 1½ inches from the tip. The rest of the tongue appears healthy. The floor of the mouth is not affected. The submaxillary glands are enlarged and firm. No other glands are enlarged. The teeth are blackened, but not decayed; the bicuspids on right side have been removed. Heart and lungs normal. Pulse 72. Respirations 16. Urine normal; no disorder nor frequency of micturition.

Operation (Dec. 4th.)—The patient was etherized, and the *right lingual* was first tied. The incision made was a curved one reaching from near the symphysis menti to near the angle of the lower jaw, with the convexity downwards, having its lowest portion parallel to the great corner of the hyoid bone. After cutting through the platysma and deep cervical fascia the tendon of the digastric was exposed, and in the angle formed by it with the great corner of the hyoid bone the artery was found running *over* the hyoglossus muscle. The artery was tied with two silk ligatures and divided between them. The submaxillary gland of that side, which was enlarged, was then removed and the facial artery tied. The *left lingual* was tied by a similar incision, the artery being found in its normal position beneath the hyoglossus muscle. On this side the temporo-maxillary vein was also tied. The submaxillary gland, being enlarged, was taken away and facial artery tied as on opposite side; several small lymphatic glands were also removed. The mouth was now kept open with a Whitehead's gag, and the tongue drawn out by a double ligature passed through its substance about an inch from the tip, and completely removed with scissors, after Whitehead's method. There was very little hemorrhage. The wounds in the neck, which had been filled with antiseptic sponges, were then closed by continuous silk sutures and dressed with iodoform and jute pads. The mouth was packed with a sticky iodoform gauze.[*]

Dec. 5th.—Temperature 100°; pulse 80; respirations 16. Has been fed every four hours per rectum with three ounces of beef juice and one ounce of brandy. As there was considerable ropy mucus in the mouth, the gauze was removed and mouth washed out with a solution of Condy's fluid and again packed with the gauze.

Dec. 6th.—Had a comfortable night, slept well; temperature 99½°; pulse 80. Mouth again washed out, as gauze would not remain in. Wound healthy-looking and covered with the iodoform mixture with which gauze is charged. Not the slightest fœtor.

Dec. 7th.—Temperature 98½°; pulse 70. Wounds in neck dressed and drainage-tubes removed. Mouth still sweet. Stopped the rectal injections and fed patient through mouth with a catheter attached to a glass funnel by means of a rubber tube.

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[*] The gauze was prepared after a formula of Dr. Robert Weir of New York. (*Medical News*, Jan. 30th, 1886.) Resin, 10 parts; Castor Oil, 6 parts; Alcohol, 15 parts; Iodoform, 5 parts.

From this time the patient progressed most favorably ; the wound in mouth rapidly granulated, and was sweet throughout. The wounds in neck did not heal so rapidly, and the wound made for tying the right lingual communicated with the mouth. The stitches on this side gave way, and the wound healed by granulation. The patient was up at the end of the first week. When discharged, December 23rd (nineteenth day), the wound in mouth had completely healed. The wound in right side of neck had not yet closed. Patient could swallow well, and could talk so as to be understood.

He wrote January 12th to Dr. Shepherd and stated that the wounds in neck had completely healed, and that since his return home he had gained seven pounds. When last heard from, the end of March, patient was attending to his business as usual, and was feeling well.

Remarks.—Excision of the tongue with preliminary ligature of the linguals is an operation which has many advantages over removal of the tongue by the écraseur. The removal of the tongue is complete and bloodless, and there is no fear of secondary hemorrhage. Few instruments are required, except scissors, knife and forceps, and by means of the incisions made for ligaturing the linguals the diseased glands in the neck can be easily detected and excised. In excision of the tongue it is very important to keep the wound in the mouth sweet, and so avoid the great danger of septic infection of the luugs. The gauze used did not stick well to the wound, but rolled up into a ball owing to the quantity of ropy mucus formed in the mouth. The antiseptic preparation with which the gauze was charged, however, coated the wound well and prevented fœtor. In another case, it would be perhaps as well to use the preparation without the gauze. A microscopical examination of the tongue by Dr. Johnston, pathologist to the hospital, showed that the growth was an epithelioma.

Reviews and Notices of Books.

A Practical Treatise on Obstetrics. (Four Vols.)

Vol. I—Anatomy of the Internal and External Genitals, Physiological Phenomena (Menstruation and Fecundation). Vol. II—The Pathology of Pregnancy. By A. CHARPENTIER, M.D., Paris. Illustrated with lithographic plates and wood engravings. New York: Wm. Wood & Co.

One of the best modern French works on Obstetrics is that of Charpentier, for some time head of the Obstetrical Clinic at the School of Medicine, and assistant to Professors Pajot and Depaul. Published in 1882, it is now translated and brought fully up to date by Dr. E. H. Grandin of New York, whose notes and criticisms are numerous and practical. The article on Embryology is by Dr. Milnes Marshall, slightly condensed from Barnes' "System of Obstetric Medicine and Surgery." It is as gratifying as it is unusual to find in a French author thorough acquaintance with, and appreciation of, foreign methods and teachings. Charpentier's book is full of references to German work and extracts from English and German authors, to whom he generally does justice. In some points his teaching is not in accord with generally received opinions in Canada and the United States. For instance, in the delivery of the placenta, he advises traction upon the cord, utterly condemning the Dublin and Credé methods. Delivery according to such methods he claims to be no longer natural, but in the highest degree artificial· Massage applied to a uterus exhausted by previous effort does positive injury, and is apt to set up peritonitis or metritis. Hemorrhage is not prevented, but shreds of membrane and bits of placenta are apt to be retained in utero. Dr. Grandin, in a note, strongly opposes these views and upholds the Credé method, but agrees with Charpentier in recommending the twisting of the placenta upon itself "in order to form, with the membranes, a species of cord more resisting, and therefore less likely to break." Grandin says "the placenta delivered, too much stress cannot be laid on the fact that it must be twisted on itself over and over again, in order that the membranes may be extracted entire.

Inattention to this fact is a very common cause of retained shreds of membrane." This practice now so commonly taught seems highly objectionable, and indeed very apt to ensure the occurrence of the accident which it aims to prevent. If the portion of the membranes inside the uterus be adherent or even firmly gripped, and if rotation of the placenta be practised, the rope of membranes will be far more apt to give way at its weakest part than to detach or disengage the portion remaining in utero. Charpentier's book, although of unequal merit, contains much valuable information, and we can heartily recommend it to the profession.

Handbook of Materia Medica, Pharmacy and Therapeutics. Including the physiological action of Drugs, the Special Therapeutics of Disease, Official and Extemporaneous Pharmacy, and Minute Directions for Prescription Writing.—By SAMUEL O. L. POTTER, M.A., M.D., Professor of the Theory and Practice of Medicine in the Cooper Medical College of San Francisco; author of "Quiz-Compends" of Anatomy and Materia Medica, &c. Philadelphia: P. Blakiston, Son & Co.

The first part of this work is devoted to a description of the materia medica, pharmacology and therapeutics of all the official drugs of the United States Pharmacopœia. In addition, many important and many unimportant unofficial agents of the pharmacopœia are described. The drugs are taken up alphabetically, an arrangement, although convenient, which has very serious objections. Therapeutics and pharmacology cannot be grasped fully unless considered according to a physiological arrangement. It is only then that the student can recognize small, but important, points of difference between agents of the same physiological group. It is only by contrasting agents of different groups that either the student or the practitioner can be saved from being immersed in a sea of physiological imcompatibles.

A physician of our acquaintance, prized for his eminent practicality, has been known to prescribe the following combination in a case of acute myelitis, viz., bromide of potassium, strychnine, Calabar bean and atropine. We believe that it is only by following a physiological arrangement in the teaching of pharmacology that a physician will be saved from putting together such a mass of incompatibles in the physiological sense.

Dr. Potter has a very good section devoted to prescribing, but in our opinion the best portion of the work is the elaborate therapeutical index. Under the head of the prominent diseases there is a description of the agents usually recommended, with a reference to the author or authors recommending the same. The concluding portion of the volume deals with a number of miscellaneous matters entirely out of place in a work of this character. Several pages are devoted to the differential diagnosis between various diseases by representing the prominent symptoms of each disease in parallel columns. Every physician surely knows that this is certainly not a method to be relied on at the bedside. It is always a method of doubtful utility. A number of other matters are discussed, but as they are found in all visiting lists, we fail to understand why Dr. Potter should make mention of them. In spite of these blemishes, however, the work will be found useful to both student and practitioner.

The Field and Limitation of the Operative Surgery of the Human Brain.—By JOHN B. ROBERTS, A.M., M.D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic; Surgeon to St. Mary's Hospital. Philadelphia: P. Blakiston, Son & Co.

This essay, which was in part read at a recent meeting of the American Surgical Association, is meant to incite the profession to rebellion against the conservatism which has so long reigned in connection with the surgery of the brain. Dr. Roberts is a radical of a very dangerous type, and must be kept within decent bounds. He would have us all going about with our waistcoat pockets full of buttons of bone like the Irish surgeons of old. Dr. Roberts' monograph is, however, well worthy of careful perusal. He believes that in "compression of the brain" the symptoms are due more to incranial inflammation than to displacing pressure exerted on the brain substance. He looks upon trephining as if attended by little more risk than amputation of a finger, and with our improved methods of treating wounds, asserts that the conversion of a simple into a compound fracture is attended with very little increased risk to life. These with many other statements of an equally extreme character go to make up the author's creed. One chapter is devoted to "Cerebral Localization," and another to the "Operative Treatment of Cerebral Lesions," both very useful for reference. The book altogether has much to commend it.

Handbook of Diseases of the Ear.—By URBAN PRITCHARD, M.D., F.R.C.S., Eng., Professor of Aural Surgery at King's College, London; Aural Surgeon to King's College Hospital; Senior Surgeon to the Royal Ear Hospital. London: H. K. Lewis.

A small manual on diseases of the ear, "intended for the use of students and practitioners," which the reader will find contains a great deal of useful information in a condensed and readable form. A short chapter on the anatomy and physiology of the ear is quite a model of brevity and clearness of description. Then follows a concise and methodical description of the examination of the ear, in which the author has introduced the late Dr. Gardiner Brown's excellent method of testing the degree and kind of impairment of the hearing power. This method has not as yet come into general use, but bids fair to become a valuable aid in diagnosis. In the description of the various diseases of the ear and their treatment the author gives chiefly his own views founded on his individual experience, the scope of the work, of course, not being sufficient to allow any lengthy discussion of disputed points. In speaking, for instance, of the treatment of mastoid inflammations, he deprecates the use of cold applications, though he admits that some aurists, under certain circumstances, attach much importance to this method of treatment; evidently he cannot have had much experience in this direction, or he would not speak so lightly of a remedy which in other hands has proved singularly efficacious.

We cordially recommend the work to all those who are interested in the subjects of which it treats, but especially to those practitioners—and there are many such—who still cherish the belief that the human ear and its diseases is a subject too difficult and complicated for any but the specialist to deal with.

The Nursing and Care of the Nervous and the Insane.—By C. K. MILLS, M.D., Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic and College for Graduates in Medicine, &c., &c. Philadelphia: J. B. Lippincott Company. 1887.

This small work is the substance of a series of lectures delivered by Dr. Mills at the training school for nurses of the Philadelphia Hospital. A very full and clear account is given of the general management of hysterical and epileptic patients. There is a good chapter devoted to a description of massage and the best way of carrying it out; a long chapter on electricity, which is too technical, covers a field which even to most general practitioners is unknown ground. The work, on the whole, will be found valuable, not only to nurses, for whom it is written, but also to physicians.

Books and Pamphlets Received.

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. By various writers. Edited by Albert H. Buck, M.D. Vol. VI. New York: Wm. Wood & Co.

THE PREVAILING DANGERS TO HEALTH IN THE MEDICAL PROFESSION.—Ramazzini (De Morbis Artificum, 1713) says that medical practitioners are comparatively exempt from ordinary diseases in consequence of their good exercise and their *hilarity* of mind, when they go home with their fees in their pockets,—" Dum bene nummati lares suos repetunt." He adds that medical men are never so unwell as when no one else is unwell. The professor remarks, however, that they are subject to hernia from going up-stairs, and catch dysentery from sitting beside their patients. Voltaire has remarked that among centenaries not one was from the faculty of medicine; that the King of France had interred forty of his physicians.—(*Thackrah on the Effects of the Arts, Trades and Professions on Health.*)

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, January 28th, 1887.

J. C. CAMERON, M.D., PRESIDENT, IN THE CHAIR.

DR. MAJOR exhibited two laryngeal growths, and gave the following histories :

Case 1—A large papillomatous growth, removed from the right vocal cord, near the anterior commisure. This growth involved the cord on its upper, inner and lower surface, and projected into the rima. The origin was catarrhal, and the duration from first indications was three years. The mass was removed with Schrötter's laryngeal guillotine almost in its entirety. The case was still under local treatment.

Case 2—*Cyst of Larynx.*—A well-known gentleman consulted me for an acute tonsillar affection. Knowing well his peculiar voice, I made a laryngoscopic examination and found a small nodular tumor occupying the free margin of the right vocal cord, yet involved in the substance of the cord. The tumor occupied a position so far forward on the cord that not only was a laryngoscopic examination difficult, but any operation for removal would also be far from easy of performance. The difficulty was further increased by the situation of the body in the substance of the cord. After applying by a laryngeal spray a quantity of a 20 per cent. solution of cocaïne, I passed in Schrötter's forceps and flattened the growth outwards by pressure exerted by the blades acting on the upper and lower surfaces of the cord. I then seized the prominence thus produced with Mackenzie's antero-posterior cutting forceps, and was so fortunate as to successfully remove the tumor. When inspected, it was about half the size of a grain of wheat. Dr. Wyatt T. Johnston, to whom I am indebted for the microscopic examination, made the following report : " Small cyst of larynx. Tumor, received in absolute alcohol, was imbedded in celloidin and cut with microtome. On staining sections with logwood, the cyst was seen to be situated in the submucous tissue. The boundaries were distinctly formed of fibrous tissue, with a thin layer of flattish epithelium over inner surface. The laryngeal mucous membrane is slightly thickened, as also is the submucous tissue. The cyst appears to have arisen probably from inflammatory obstruction of one of the mucous glands." The quantity of cocaïne used was very great, and it was with no small degree of hesitatation that it was employed. The voice, which previous to the operation had not been under any control, was greatly improved, and a good speaking voice was produced. This gentleman, who, on attempting to shout or call out loudly, could not be heard at a distance of ten feet, can now emit a good volume of sound. Some after-treatment with nitrate of silver was resorted to, the case progressing satisfactorily.

Tumor of the Ovary and Fallopian Tube.—Dr. Gardner exhibited a friable, irregular tumor about the size of a child's head, removed by him a few days before from a maiden lady of 43 years. On opening the abdomen, the tumor of the right ovary and tube was found firmly adherent to the intestines, omentum and floor of the pelvis. The operation was a very formidable one. The patient, however, recovered well from the effects of the operation, having experienced no severe shock, and was apparently making a rapid recovery.

Myxœdema.—Dr. James Stewart read a paper on a case of myxœdema, which will appear in our next issue.

Discussion.—Dr. R. L. MacDonnell said that the patient had been under his observation in the General Hospital at different times. It was generally regarded there as a case of tetanus. He had never been able to find that the patient had any tetanic spasms in the hospital, though these were carefully looked for. He did not think that the thyroid in the patient was altogether absent. In many it is difficult to make out the gland by external manipulations. Finally, he asked if Dr. Stewart had ever seen the patient in a tetanic spasm.

Dr. Merrill said he had known the patient some years. He had never seen any tetanic spasms, but the patient had complained about frequent attacks of severe colicky pains. He was always a very badly-nourished, dyspeptic-looking man.

Dr. Shepherd could not agree with Dr. Stewart's suggestion that the reason myxœdema or cachexia strumipriva follows excision of the thyroid is because of the disturbing damage done to the sympathetic system, as the affection, so far as he knew, never followed extensive operations in the neck (as removal of chains of enlarged glands and tumors), when the sympathetic trunk is quite as much interfered with as in the removal of the thyroid. When no myxœdema follows the operation of removal of the gland, it is supposed to be incomplete removal.

Dr. Reed asked if Dr. Stewart could give the average temperature of the patient.

Dr. Mills said—To believe that any gland or other organ existed to *prevent* the formation of a substance, whether normal or abnormal, was inconsistent with general physiological principles. True, the removal of certain glands, as the testicles in the young, arrested development, both physical and psychical. In the adult dog, such removal was followed by obesity, which could be largely accounted for by the inactivity of the animal, associated with the psychical shrinkage—the curtailment in the number and variety of the afferent impulses reaching the nerve centres. It had been asserted that after the removal of the thyroid in children there was stunted development, especially intellectually. It is likely metabolic changes follow removal of the thyroid ; owing to the influence on the nervous system there is a loss of balance. All healthful life implies balance of function. It was not yet clear how the balance was destroyed by removal of the thyroid ; but we were on the way to knowledge, for we had learned, experimentally, that this organ was not a blood-former. If, as had been suggested, the changes following experimental or surgical removal were due to injury to the sympathetic, one would expect to observe vaso-motor symptoms, which had not been the case, though such an objection must not be too strongly urged ; for though dilation follows section of the cervical sympathetic, such is not permanent, and if transient, might be overlooked.

Dr. Stewart, in reply, stated that he had seen the patient in tetanic spasms many times. When first seen the patient he had an attack. With regard to the average temperature, it was low—about 97°. The patient always complained of cold.

The whole question of the function of the thyroid was still in a very unsettled state. He did not wish to be understood as saying that atrophy or disappearance of the thyroid had nothing to do with myxœdema. There is certainly evidence pointing strongly to both myxœdema and tetany being due to neurotic changes.

Stated Meeting, Feb. 11th, 1887.

J. C. CAMERON, M.D., PRESIDENT, IN THE CHAIR.

DR. ROE of Rochester and DR. SHUFELDT of New York were the guests of the Society.

Arytenoid Disease.—DR. MAJOR communicated a paper on arytenoid disease, illustrated by a number of cases. The author's object was to point out the comparative frequency of disease of the arytenoid joint, and also to emphasize the fact that a proportion of laryngeal cases regarded as paralysis were not the result of paralysis, but of anchylosis of the crico-arytenoid joint. The means of diagnosis and other points of interest were briefly referred to. Dr. Major also exhibited Dr. Dwyer's tubage apparatus, and demonstrated their application and use.

DR. ROE (Rochester), after expressing his grateful appreciation of the kindness he had met with in Montreal, said that anchylosis of the arytenoid joint, especially if only partial, is often overlooked by the general practitioner. Partial or complete aphonia is very often attributed to paralysis of the muscles of the larynx when this symptom is due entirely to arytenoid disease. Any inflammation of the larynx involving the articulations, if at all severe, is apt to leave the joints stiff; and as these inflammations are common, arytenoid disease is common. Aphonia is very rarely due to paralysis of the laryngeal muscles. The speaker then gave the details of a case of arytenoid disease resulting from laryngeal phthisis, where there was no systemic affection. In this case there was a tubercular infiltration of the articulations, resulting in almost entire loss of voice. The left arytenoid was most enlarged and stiffest. It is a fortunate thing that, as a rule, but one cartilage is affected.

Three Cases of Laparotomy.—DR. TRENHOLME reported three cases of laparotomy lately performed for abdominal tumors. The three cases are of much interest, as they necessitated peculiar methods of operation:

Case 1—Mrs. McD., Kingston, Ont., patient of Dr. Dupuis, suffering for many years; was pale, anæmic and weak; legs œdematous; urine scanty and albuminous; heart weak and quick. Assisted by Drs. Dupuis and Harderson, removed a solid tumor of left ovary 10 inches long, 7½ broad and 5 thick, weighing 8 lbs. Had to make a large incision. Mode of operation, etc., as usual. Patient made an excellent recovery.

Case 2—Mrs. E., St. Hyacinthe, aged 29; has suffered severely for the last eight years with pelvic disease, chiefly in left side and down the leg. Dense, but uniform tumor occupied brim of pelvis and pressed a normal-sized uterus down and toward right side. At present time is suffering from febrile symptoms; sordes on teeth and lips, pulse 165, and temperature from 100° to 102°. Has had severe anorexia for some time. Assisted by Dr. Kennedy, removed a suppurating dermoid cyst of left ovary weighing 12 lbs. Emptied the cyst with patient on left side, and drew out the sac as fast as it emptied in such a way that not a drop of pus entered the peritoneal cavity.

Case 3—Mrs. C., Granby, aged 21; always had pelvic distress since menstruation began. Of late has suffered very much in pelvic region. Pulse 140 to 160; temperature 102°. Can take little food. Lips and teeth show febrile state. Removed a suppurating cyst weighing 4 lbs., which was wedged into the pelvis between bladder and uterus, which was pushed downward. Cyst wall was universally and strongly adherent, and cyst was brought to edge of abdominal incision with great difficulty. The pus was evacuated in a manner similar to the last. The tumor was formed in broad ligament, consequently pedicle was very broad and difficult to tie, not only on account of its size, but because it was so bound down, and connected with fundus of the uterus. One large artery on right side could not be tied, and was secured by porous forceps, which were left sticking out of the lower part of the wound, with a drainage-tube. The forceps was removed at twenty-third hour, and the drainage-tube after the second day. Free bloody, serous discharge occurred for several days, but the patient has made, so far, an excellent recovery.

Discussion.—Dr. Gardner said that Dr. Trenholme was to be congratulated on the results of his operations. He had found from experience that no case was too bad to attack, and this was borne out by the last cited case of Dr. Trenholme's.

Dr. Alloway asked if Dr. Trenholme had used a drainage-tube to evacuate the contents of the cyst.

Dr. Trenholme replied that it was unnecessary, as the cyst was tapped at the incision, and its own walls formed a tube to conduct the contents away.

Dermoid Cyst.—Dr. Gardner exhibited a dermoid ovarian cyst, which he said had nothing out of the common. There was the usual history of such cases up to a short time before operation, when the tumor became very painful and tender. On opening the abdomen, the tumor was found much congested and twisted several times on its pedicle. To this twisting was probably due the congestion of the tumor; it was to a certain extent strangulated.

Dr. Alloway referred at length to the different explanations offered for the phenomena of twisted pedicles. The alternate filling and emptying of the bladder or the rectum is the usual explanation, but this is not altogether satisfactory.

Dr. Bell reported a case in which the patient, a man aged —, presented a marked prominence in connection with the spine of upper cervical vertebræ, which it was expected would result in post-pharyngeal abscess. The history was one of progressive emaciation, lasting some months, with signs of slight consolidation in both lungs. The case was looked upon as one of tubercular origin. At the autopsy by Dr. Johnston, a large cancerous mass was found in the pancreas, infiltrating the stomach, with extensive secondary deposits in the lungs and liver. Very numerous secondary nodules were found in the vertebræ; the bodies of the sixth and eighth dorsal and seventh cervical vertebræ were found to be extensively softened, and to contain numerous cancerous nodules. Numerous nodules were also found in the ribs; the second and third ribs consisted, near the junction with the cartilages, of a thin shell of brittle bone, surrounding masses of new growth nearly as large walnuts, and when examined were found fractured. The bodies of the upper cervical vertebræ were healthy. The spines were not examined. There was no suppuration. On microscopic examination the growth was found to consist of epithelial cells of small size arranged in alveoli, with scanty stroma.

TORONTO MEDICAL SOCIETY.

Stated Meeting, February 17*th*, 1887.

THE PRESIDENT, DR. MCPHEDRAN, IN THE CHAIR.

Pathological Specimens.—DR. MCPHEDRAN exhibited several enlarged suppurating glands which he had removed from the neck. The disease commenced about a year ago. At that time the glands inflamed, suppurated, and were lanced. The openings continued to discharge freely and showed no tendency to heal. The operation for their extirpation was then performed. Each sinus was slit up freely, and was found to be lined by a soft, gelatinous substance. This was scraped out with Volkmann's spoons, the remains of the caseous glands were removed, and drainage-tubes laid in the sinuses. Moderate pressure was then applied over all by means of gauze and absorbent cotton. Healing took place for the most part kindly.

DR. SWEETNAM had used calc. chloride in rather large doses with marked beneficial effect in similar cases.

DR. ATHERTON approved of the plan of slitting up the sinuses and removing the glands. He had not found much benefit from calc. chloride, but had extirpated the inflamed glands with gratifying success in several cases, one of syphilitic origin.

DR. OLDRIGHT had used nitrate of silver as a caustic by heating a knitting-needle or probe and then placing it in contact with the caustic, so that it acquired a thin coating. In this way caustic could be applied to the whole of the sinuses. At the same time he used cod-liver oil and the iodides internally.

DR. REEVE presented (1) a specimen of calcified crystalline lens removed from the anterior chamber of the eye, into which it had been dislocated. Before operation, the pupil was strongly contracted with eserine sulphate so as to prevent the displacement of the lens backwards during operation. Cocaine was also instilled into the eye at the same time to relieve the pain caused by the eserine, and also to obtund the sensibility of the cornea and prevent spasm of the orbicularis muscle. The incision was made downwards and the lens removed without trouble. (2) A glaucomatous eyeball in which there was dislocation of the lens downwards upon the iris and into the anterior chamber. The surface of the eyeball bulged in some places owing to the localized thinning of the sclerotic and the great tension of the intraocular fluids. The vitreous humor was quite fluid. At the time of operation there was pan-ophthalmitis of the affected eye, and as sympathetic inflammation of its fellow was feared, it was thought advisable to remove the inflamed organ.

DR. ATHERTON had found a calcified lens at the fundus of an eye which he had removed for pan-ophthalmitis of three weeks' duration. The retina was atrophied at and near the dislocated lens.

Cases in Practice.—DR. MCPHEDRAN related a case of syphilis in which, two weeks after intercourse, a number of herpetic ulcers appeared in the sulcus behind the glans. Within a few days four of these formed typical Hunterian chancres. The unusual number of hard chancres and their early appearance are remarkable in this case.

DR. SWEETNAM reported a case of perforation of the soft palate from syphilitic ulceration. After ten days of anti-syphilitic treatment the palate was operated upon in the usual way. It did well for five days, when the stitches tore through from contact with solid food, which had been taken contrary to orders, An ordinary rubber palate-plate was then made by a dentist, with a boss upon its upper surface, which exactly fitted the aperture. This produced great improvement in the voice, and was worn with comfort. The boss was snipped off when granulation commenced, and the plate still worn till complete healing took place. The support and rest given to the soft palate by the plate evidently promoted healing.

Stated Meeting, February 24th, 1887.

THE PRESIDENT, DR. MCPHEDRAN, IN THE CHAIR.

DR. W. H. B. AIKINS read a paper on *The Bacillus of Typhoid Fever*, illustrating the subject by means of some very interesting cultures of the bacilli on patato, and in gelatine and agar-agar. Several microscopic specimens of the growing and stained bacilli were also shown.

DR. HAMILTON followed with a paper on *Reduction of Hernia.* The methods of reduction upon which he dwelt were: 1, Gravity with succussion, as practised by inversion; 2, Taxis; 3, Application of cold externally, by means of ether-spray, ice-bag, etc., and internally by means of cold-water injections; 4, Digital dilatation of the constricting ring.

Discussion.—DR. OLDRIGHT expressed the opinion that digital dilatation of the ring was in the majority of cases almost, if not altogether, impracticable, as it was found exceedingly difficult, even when the sac was empty and after dividing the skin, to dilate the dense fibrous inelastic ring.

DR. DOOLITTLE mentioned a case in which reduction by taxis occurred in a few minutes, after suspension by the friends of the patient for nearly an hour had failed.

DR. MCFARLANE had always availed himself of the advantages of gravity offered by elevation of the hips. In making taxis, the anatomical relations of the parts should be borne in mind, and pressure made exactly in the course of the axis of the canal.

DR. CARSON thought that both suspension and taxis have their uses in different cases. He illustrated by a diagram how suspension would favor reduction, when the contents of the sac consisted of coils of intestine or a single knuckle with fluid contents. And also showed that if the contents of the sac were solid and firm, suspension would fail.

DR. ATHERTON thought rectal injection might be advantageously used in acute cases—*i.e.*, where the sac of the hernia is newly formed. He had succeeded in reducing a hernia, after withdrawing a small quantity of fluid with a hypodermic syringe.

Cancer of the Breast.—DRS. SMITH and MCPHEDRAN showed a case of cancer of the breast in a woman aged 44. The growth commenced nine months ago. It is now nearly as large as a child's head, indurated in some parts and cystic in others. The surface is quite nodular; and ulceration, giving rise to profuse hemorrhage and serous discharge, has occurred in a few spots. The axillary and supra-clavicular glands are enlarged to such an extent that the Society thought operation would fail to eradicate the disease.

Stated Meeting, March 31, 1887.

THE PRESIDENT, DR. MCPHEDRAN, IN THE CHAIR.

Rheumatoid Arthritis.—DR. MCPHEDRAN presented a case of commencing rheumatoid arthritis in a young man aged 19. Three years ago the metatarso-phalangeal joint of the left great toe began to get stiff and painful, with crackling on moving the joint. At present there is thickening of the ends of the bones and considerable stiffness of the joint. The interphalangeal joints of the same toe are beginning to be affected. Iodides internally and local applications constitute the treatment. The prognosis is unfavorable.

Pathological Specimens.—DR. OLDRIGHT exhibited a calculus weighing about four drachms, which he had removed from a boy aged six years. The symptoms commenced two years ago, with frequent and painful micturition. Sand was passed at intervals. There was sometimes sudden stoppage of the stream The lateral operation was performed and two stones removed, one having three facets and the other four.

DR. W. H. B. AIKINS exhibited the brain from a young woman aged 24, who had died a few hours after labor. Bright's disease commenced three years ago. Before labor commenced there was a large amount of œdema of the lower limbs and of the external genitals. Urine loaded with albumen. Bowels moved freely; intellect clear, but slight headache. After labor had been in progress about four hours, the patient gradually became semi-comatose, right hemiplegia set in, the right pupil was contracted, and the patient had several convulsions. Patient was delivered of a dead fœtus, and shortly afterwards paralysis became general, coma ensued, and patient died about twelve hours after labor set in. At the post-mortem examination, the lateral, third and fourth ventricles of the brain were found filled with a recent clot; there was also a diffused hemorrhage into the membranes at the lower and back part of the cerebellum. The kidneys were large and white.

DR. CARSON expressed the opinion that when pregnancy is preceded and accompanied by Bright's disease, the gestation should be terminated prematurely.

DR. CAMERON thought simple albuminuria of pregnancy could be successfully treated if taken early. Abortion should only be induced when treatment proves of no avail. In such a case as the above the hemorrhage could probably be checked by venesection.

DR. OLDRIGHT always administered pulv. jalapæ co., and alkaline diuretics, on the first appearance of œdema.

DR. T. S. COVERNTON presented a specimen of carcinoma of the liver, from a woman aged 59. There was no history of cancer in the family. Patient had suffered from indigestion and hepatic colic. On March 5th an attack of pleurisy set in ; the chest became filled with fluid and was aspirated. At the same time a smooth, rounded tumor was felt in the epigastric region, apparently depending from the liver. No fluctuation was detected. After tapping the chest a second time an exploratory incision was made over the tumor. On finding the carcinomatous nature of the growth the wound was closed. Death took place on the 11th March. *Post-mortem:* The surface of the liver presented numerous soft, semi-fluctuating tumors, varying in size from a walnut to a goose-egg. The right lung and pleura also presented nodular growths ; there was about a quart of fluid in the pleural sac.

Stated Meeting, April 14, 1887.

THE PRESIDENT, DR. MCPHEDRAN, IN THE CHAIR.

The Irritable Heart of Civil Life.—DR. OSLER of Philadelphia read a paper on this subject. This condition, he said, though not so dangerous to life as organic disease, often gives rise to great discomfort and uneasiness. The prominent symptoms are palpitation, pain, dyspnœa, and slight enlargement. The condition is comparable to the irritable heart mentioned by Da Costa as occurring in military life, particularly among young recruits. As regards the conditions under consideration, the following is the etiological classification: (1) Toxic cases ; (2) those traceable to over-exertion; (3) those due to sexual excesses; and (4) those accompanying neurasthenia. The toxic agents giving rise to irritable heart are tobacco (which is the most common), tea and coffee. Young men from 18 to 25 years are most frequently the subjects of irritable heart. There is usually some slight enlargement of the organ, and the symptoms accompany-this are palpitation on exertion, more or less pain, and occasionally dyspnœa. Several cases illustrating this condition were recited. The principal points in treatment were removal of the cause, rest in bed, and pot. brom. gr. xv. *ter die*. Most of the cases recovered completely. Irritable heart from over-exertion, otherwise known as heart-strain or heart-shock, is met with in gymnasts, as runners, rowers, etc. Heart-strain has two forms:

(1) Acute dilatation (heart-shock), the result of an individual great and continued effort. In such cases perfect recovery never takes place, and the subjects are thereafter incapacitated for any great effort.

(2) The irritable heart as the result of persistent and repeated great exertions. This is the condition described by Da Costa as occurring in young soldiers. Gradual hypertrophy and dilatation may precede the irritability. These conditions are sometimes classified under the head of idiopathic hypertrophy and dilatation. Cardiac dropsy and murmurs may be accompanying symptoms. Chronic alcoholism and syphilis, as well as over-exertion, enter into the causation.

Sexual excess, either in the form of coitus or masturbation, induces irritability of heart. The following is illustrative: A male, aged 26; history good; had chewed tobacco, but never smoked to excess; had lifted a good deal; had been a masturbator, and also of late had indulged in sexual excess with women. The heart-beat was hard, but not rapid when at rest; there was considerable pain in the chest; fluttering at night was a distressing symptom; the pulsations were very variable; in recumbent posture the pulse was 74, and 132 when erect; there was no murmur. Under treatment he recovered in about three months.

The cases of irritable heart, occurring as a result of neurasthenia, are nearly twice as frequent in females as in men. They are accompanied by mental distress, debility, nervous dyspepsia, and, in women, uterine disease. There is sometimes a peculiar vaso-motor disturbance, causing flushing or even lividity of various parts of the cutaneous surface. A feeling of impending death is a frequent and most distressing symptom in some cases. Two other conditions, tachy-cordia, in which the pulsations reach 180 to 200, and Graves' disease, are forms of irritable heart.

Treatment.—Perfect rest in the recumbent posture, careful feeding, and removal of the cause are important. The application of cold (50° or 60°F.) to the præcordia, by means of Littre's tubes, frequently allay the pain and rapid action of the heart. Galvanism has been used with some benefit in the tobacco heart. Of drugs, pot. brom., in doses of gr. vi *ter die*, has been found signally useful. Nux vomica is also beneficial. Aconite and digitalis seem to have no special influence over this condition.

Discussion.—DR. GRAHAM considered that among toxic agents might be mentioned those formed in the system, especially in patients of the gouty or rheumatic diathesis. In these cases large quantities of starchy or saccharine foods, or even small quantities of alcohol, give rise to extreme irritation of the heart.

DR. BRYCE had met cases in which saccharine and starchy food caused distressing cardiac symptoms by distending the stomach.

DR. WILSON had used nitro-glycerine and ammonia in such cases with benefit.

DR. ZIMMERMAN found that emp. belladonnæ over the præcordia often gave relief. Arsenic and cod liver oil were also found beneficial. In cases of irritability due to distension of the stomach, small doses of ac. carbolic are useful.

DRS. WORKMAN, COVERNTON, MULLIN (Hamilton), MCPHEDRAN and MACDONALD took part in the discussion, after which DR. OSLER replied.

HURON MEDICAL ASSOCIATION.

Stated Meeting, April 19th, 1887.

THE PRESIDENT, DR. WILLIAM GRAHAM, IN THE CHAIR.

Cases in Practice.—DR. TAYLOR presented a case of paralysis following a severe attack of diphtheria in a child of seven years. In this case the disease had manifested itself in a severe form.

The throat was much swollen, and the characteristic patches of diphtheria were very prominent. The constitutional symptoms were severe, and the recovery of the patient was not expected, but he slowly convalesced and the paralysis became very noticeable. It was gradually disappearing under the use of Tr. Ferri Perchl. with Tr. Nux Vomica. A point of interest in this case was the fact that although it had occurred in a family of ten persons living in most favorable quarters for the development of an epidemic, yet no second case had followed in the family. The doctor had ordered isolation of the other members of the family and disinfection, but his orders were not obeyed.

Dr. Chisholm (Wingham) said he had noticed that children who swallowed the membrane when it became dislodged from the throat were more frequently affected with diphtheritic paralysis.

Dr. Graham (Brussels) presented a case of progressive muscular atrophy, in which the symptoms of the disease were well marked. The patient was a man aged 55. The duration of the disease had been about two years, and during that time the patient had been slowly failing in strength. The muscular wasting was most noticeable about the shoulder and hip joints. While the prognosis was regarded as unfavorable, massage and faradization were recommended.

Dr. Smith (Seaforth) related the history of a case of diabetes insipidus under his care. The disease first appeared about five months ago, when the amount of urine passed daily was nine and ten pints. This amount was slowly increased until, in two months, the amonnt voided daily was fourteen pints. No sugar present. Specific gravity in early part of disease was 1003 to 1005. Ergot in 30 minim doses of the fluid extract had been given three times a day, also a pill composed of a grain and a half of extract of belladonna and half a grain of opium, but these failed. Latterly, by using Clement's solution of bromide of arsenic in three-drop doses after each meal, and acid phosphoric dil. in small doses to lessen the thirst, the quantity of urine was lessened to five pints daily, with specific gravity of 1010. The patient's general health was better, but the polyuria still continued, though not to as great an extent as formerly.

Dr. McKenzie (Belgrave) read the notes of an interesting case of rheumatoid arthritis occurring in a woman aged 50 years. The knee was the joint involved. Although the treatment of these cases was generally unsatisfactory, a very favorable result was reported from the use of arsenic, in gradually increased doses of Fowler's solution until eight minims were taken after each meal. The faradic current was also tried with satisfaction in this case. The treatment in the latter part of the disease consisted of the administration of potass. iodide combined with liquor arsenicalis, and the case might now be pronounced cured, as the patient had been for some time free from any symptom of the disease.

Pathological Specimen.—DR. MACKID (Seaforth) presented a specimen of a fibro-cystic tumor removed from the superior angle of the neck of a woman who had previously appeared at a meeting of this Association. The case was then considered to be one of Hodgkin's disease, but latterly no improvement taking place in the health of the patient, a microscopic examination was made of a small section, and the growth proving to be fibro-cystic, its removal was decided upon. The wound healed nicely by first intention, and the patient is now going abont and attending to her usual duties.

Puerperal Fever.—DR. WORTHINGTON (Clinton) read a paper on puerperal fever preceding delivery, and gave an interesting account of three cases which he had met in practice, one of them being of recent occurrence. He was called to a lady in the end of third month of pregnancy, and found hemorrhage had been going on for ten hours, but without any labor pains. After prescribing complete rest and giving ergot in small doses the hemorrhage was lessened, and on making a digital examination the following morning found fœtus in a position to be removed, but the os uteri rigid and undilatable. During the day the hemorrhage was slight, but during the following night it was increased so that when he called in the morning he found a marked change in patient's countenance. Nothing had come away and nothing more could be detected upon examination, the os being still rigid. While considering what course to pursue, a severe chill came on and lasted for about three hours. He decided at once to dilate the os, first using, without success, Barnes' dilator, and then inserted two small-sized sponge-tents. After waiting a short time and administering a full dose of ergot, he had the satisfaction of seeing the fœtus and placenta discharged. The patient's pulse was then 130 and the temperature 105°F. At once gave quinine, and prepared and used a sublimate solution (1 to 3000) to wash out uterus and vagina. Gave the quinine every three hours and repeated the uterine irrigation every six hours. In a short time the pulse-beat had fallen to 105 and the temperature to 102°. She slowly convalesced, making a good recovery. The questions arose—(1) Could not the septic action have been prevented by the early use of sublimate or carbolic injections? (2) Could not the hemorrhage have been more completely restored? The other two cases which Dr. W. related were also interesting. One of them occurred three weeks before labor was expected, and by the use of opium in full doses and the application of turpentine stupes to the abdomen the symptoms of a severe attack of puerperal peritonitis slowly abated, and the patient went on to full term. The other case was similar to the last one mentioned, with the exception that the attack was nearer to the time at which confinement was expected.

The discussion which took place was mainly on the use of antiseptics in these cases.

Dr. Williams (Clinton) related the history of a case at present under treatment which he had diagnosed as a mild case of typhoid. In the latter part of the disease a slight swelling was noticed in the right iliac region, in which fluctuation was detected, and from which, on opening, a small amount of blood and a quantity of healthy pus discharged. There had evidently been no absorption of the pus, as the temperature was not increased. There was considerable induration at the site of the opening, which was still continuing to discharge. The question arose as to the most probable cause of this interesting sequel to the disease.

Question Drawer.—It was decided to have a question drawer at future meetings. Each will have the privilege of depositing questions with the secretary any time before the meeting, the answers to be given by the Association during the session. This will likely be an interesting feature of future meetings.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, April 5th, 1887.

THE PRESIDENT, DR. MCCARGOW, IN THE CHAIR.

Pathological Specimens.—The PRESIDENT exhibited a specimen of disease of the vermiform appendix, with part of ileum, and gave some history of the case. He also exhibited a specimen of *cancer of the penis*, from a negro aged about 60 years, of some months standing. Dr. Malloch removed the penis In this case the disease had extended so high up, and being complicated with a swollen gland in the groin, amputation close to the pubes was necessary; the gland was also removed. To obviate the irritation which would be caused by the flow of urine over the scrotum and adjacent parts the scrotum was split, the spongy portion of the urethra dissected down to the triangular ligament and brought out in the perineum, and the corpora cavernosa cut off close to the bones. The incisions were then brought together with sutures and the necessary dressings applied.

Perineal Section.—DR. MALLOCH reported two cases of perineal section which occurred during the past week. One from retention due to hypertrophy of the prostate, complicated with a false passage; and commenting on the operation for its relief, he expressed an opinion in favor of Harrison's method of puncturing through the prostate, but not having the necessary instrument, he cut into the membranous portion of the urethra and established communication with the bladder. The second case was one of extravasation of urine resulting from a traumatic stricture of two years standing. The patient, when first seen, had not passed any urine for four days. When examined, the scrotum was found enormously swollen and the bladder much distended. Very little pain was complained of. Wheelhouse's operation was performed. A grooved, straight staff was passed into the urethra until it came to the stricture; the incision was then made in the perineum, the stricture divided, the staff then turned so that the knob on the reverse side hooked on the urethra, and by gentle traction the urethra was put on the stretch. A sufficient opening being made in the anterior aspect of the urethra, a No. 12 gum elastic catheter was passed into the bladder, the catheter was then bent, and the other end inserted into the part of the urethra above the stricture and carried up till it appeared at the meatus. The scrotum was then freely incised to allow of the escape of urine, and a large quantity was passed from the bladder through the catheter. The last account states that the case is doing well.

—A curious mixture of bad pathology and good surgery is presented by a case reported in the *Virginia Medical Monthly* for October by Dr. Wilkerson, under the following startling caption: " Incision into the pelvis of the kidney and treatment topically through the drainage-tube for the cure of Bright's disease." The patient, a man aged 30, had received an injury of the back, and six months after began to fail in health, became emaciated, had hectic, and passed blood and pus in the urine. Deep palpation on the right side gave an indistinct sense of fluctuation. Lumbar nephrotomy was performed, over a pint of matter was discharged, the sac was swabbed out, and a drainage-tube inserted. The man made a good recovery. The case was evidently one of pyelonephrosis, and the treatment pursued most judicious and successful. It is remarkable how deep-rooted is the idea that all affections of the kidney belong to Bright's disease; fortunately for the patient, the doctor's surgery was at least half a century in advance of his pathology, and it is a pity that the report of so interesting a case should be marred by a title both misleading and erroneous.—*Medical News.*

CANADA

Medical and Surgical Journal.

MONTREAL, MAY, 1887.

THE ROYAL VICTORIA HOSPITAL.

It is with no ordinary degree of pleasure that we record the truly munificent gift to Montreal of $1,000,000, for the building and permanent endowment of an Hospital, to be known as the "Royal Victoria Hospital." Sir George Stephen, Bart., and Sir Donald A. Smith are the donors of this princely gift. They each contribute half a million to this purpose. The "Jubilee Year" will no doubt be characterized by many liberal donations in Her Majesty's wide dominions, but is unlikely that none will even approach that of the noble-hearted act of Sir Geo. Stephen and Sir Donald A. Smith. It is an act that will render the year memorable for all time.

THE COAGULATION OF THE BLOOD.

One of the latest investigations intended to throw light on the conditions which determine the coagulation of the blood is that of Holtzmann. His conclusions may be stated briefly as follows ;

1. A body called fibrinogen, belonging to the class of globulins, can be obtained from horse's blood, and solutions of fibrinogen neither coagulate spontaneously at ordinary temperatures nor upon dilution with water.

2. Defibrinated blood, blood serum, watery extracts of the albuminous coagulum formed in blood-serum by the addition of alcohol or the extract obtained from egg-albumen coagulated in the same way, the putrescent fluids obtained from cooked egg-

albumen, and long-continued passage of oxygen, all cause typical coagulation of the solution of fibrinogen at ordinary temperatures, with the production of fibrin.

3. *Fibrin-ferment is not peculiar to the blood*, but occurs among the decomposition products of albumen.

4. It is probable that fibrin is the product of the oxidation of fibrinogen.

5. When a dog is rapidly bled to death (one and a half to three hours), the last portions of blood drawn clot quicker than the first, though the amount of fibrin found does not markedly vary.

6. Venous blood clots more slowly than arterial blood ; suffocation delays coagulation. Curare, chloral hydrate, chloroform, quinine and sodium carbonate also delay coagulation.

If this view of coagulation—the oxidation of fibrinogen—be accepted, what, then, becomes of the previous theories and their so-called confirmations ? No doubt this theory will give place to another and another until the utter barrenness of the problem, as we pointed out in the December number of the JOURNAL, is realized. We still maintain, as stated then, that it is likely "that coagulation may take place under a variety of circumstances, and, at all events, that the method, as we prefer to call it rather than the cause, is not the same in all animals, and possibly not the same always in the same animal—*i.e.*, that certain events may at one time take a larger share in the process than at another, and that the question is at any rate a comparatively fruitless one."

IS IODOFORM AN ANTISEPTIC ?

Iodoform has always been ranked so high among antiseptics that to question its efficacy seems rank heresy ; yet recently Drs. Heya and Rovsing of Copenhagen have published researches throwing doubt upon its antiseptic properties. The experiments chiefly consisted in mixing iodoform powder with about equal parts of sterilized gelatine or serum, and inoculating with various bacteria, notably the Staphylococcus Pyogenes, further inoculating through a thick layer of powdered iodoform or through a solution of iodoform in oil. The result showed that the contact of iodoform, as such, is absolutely devoid of significant properties, the cultures growing quite as well when it was present as when absent. Injections of cultures of staphylococcus mixed with iodoform produced suppuration.

The experiments seem to have been carefully and impartially made. The authors call attention to the fact that while the claims of iodoform as an antiseptic have never been disputed, its properties have never been established by experiment. They think it possible that though iodoform itself is inert, yet that in the body it may form iodides, or by combining with the fat in the tissues iodine may be set free, and in this way it may be indirectly an antiseptic. They also call attention to the fact that in surgical cases wounds treated with iodoform have been previously treated with sublimate or carbolic solutions. It is to be regretted that the experiments they performed upon animals were ridiculously few ; certainly it will be difficult to convince surgeons that their confidence has been misplaced by any manipulation of test-tubes and sterile gelatine.

As things stand at present, it has been conclusively shown that pure iodoform has no disinfectant power over cultures of bacteria in the usual media, but it still remains to be seen whether, under the conditions under which it is applied in surgery, it may not act as an antiseptic. However this may end, it must be remembered that to the already recognized dangers attending its use these experiments show that since the powder has itself no effect upon bacteria, it is always possible to introduce infective material into a wound through the use of impure iodoform.

ACUTE ASCENDING PARALYSIS.

In the year 1859, Landry described a form of paralysis to which he gave the above name. He looked upon the disease as an essential paralysis—that is, a paralysis not due to any recognizable lesion of the nervous system. The disease, which is a very fatal one, begins generally in the lower extremities, and rapidly extends upwards, involving, in quick succession, the muscles of the upper extremities and those of respiration. Death is due to paralysis of the latter muscles. It is very rare to find the order of involvement of the muscles reversed, the bulbar symptoms being nearly always the last to make their appearance. The paralysis is always hypotonic. There is never disturbances of nutrition in the paralyzed muscles, and, therefore, no change from the normal electrical reactions. There is loss of both cutaneous and tendinous reflexes. Disturbance of sensation is no essential feature of this disease, its chief feature being pure motor ascending paralysis, with flaccidity of the muscles. As a rule, it is unattended with fever, but almost invariably there is enlargement of the spleen. It runs an acute course, terminating usually within a week or ten days, and even sometimes within forty-eight hours.

The most careful examination of the spinal cord in a large number of cases has given decidedly negative results; no changes having been found that would in the least degree be sufficient to account for the grave nature of the disease. Owing to these negative results the disease was generally considered to be of a functional nature. The profound nature of the paralysis, however, could not be explained by any such view. Since the important *rôle* played by changes in the nerves as a cause of paralysis has been recognized, particular attention has been directed to this portion of the nervous system in examinations of patients who have died from acute ascending paralysis. The most important contribution of this kind has just been made by Pitres and Vaillard (*Archives de Physiologie*, Feb. 15, 1887). In a case running an extremely rapid course (24 hours), they found marked changes in a number of peripheral nerves, while there were no morbid alterations whatever in the spinal cord, medulla or pons. The change in the nerves was not of the nature of the ordinary Wallerian degeneration (the changes that take place in a nerve when it is separated from its nerve centre), but consisted in a primary affection of the myeline and cylinder axis. Emulsification of the myeline was found, and the cylinder axis was so swollen and changed that functionally it was useless.

It is a very striking fact that such profound changes should be induced within twenty-four hours. It is a strong testimony to the hypothesis that these changes are brought about by the action of a poison (chemical ?). Whether all cases of Landry's paralysis will be found to be due to changes in the peripheral nerves or not, it is impossible to say, the case quoted only proving that a profound and rapidly fatal paralysis (clinically inseparable from Landry's) may be caused by alterations (non-inflammatory) in the peripheral nerves. In this case, unfortunately, there was no examination of the phrenic or other respiratory nerves. The paralysis developed during convalescence from typhoid fever, but the patient had not wholly recovered from a broncho-pneumonia which came on about the tenth day of the fever.

THE TREATMENT OF PHTHISIS.

The treatment of phthisis with gaseous enemata has already a very extensive literature. It is, unfortunately however, built on such a flimsy foundation as to be practically worthless. The eagerness to rush into print with crude and half-digested observations is one of the crying evils of the day. Its influence is more pernicious than beneficial. Why can't we " learn to labor and to wait."

McGILL UNIVERSITY—ANNUAL CONVOCATION.

The annual convocation of McGill University for the conferring of degrees in medicine took place in the William Molson Hall, on Tuesday afternoon, March 29th. There was a large attendance of the friends and patrons of the University. The Hon. Senator Ferrier, Chancellor of the University, occupied the chair. Among those present on the platform were : Messrs. John H. R. Molson and Samuel Finlay ; Dr. R. P. Howard, Dean of the Faculty ; Dr. Geo. Ross ; Prof. H. T. Bovey, Dean of the Faculty of Applied Science, Queen's College, Cambridge ; Hon. Judge J. S. C. Wurtele ; Sir Wm. Dawson, Principal of the University ; Drs. G. E. Fenwick, G. P. Girdwood, Francis J. Shepherd, Frank Buller, Jas. Stewart, Geo. Wilkins, C. E. Cameron, T. Wesley Mills, R. J. B. Howard, Wm. McConnell, Principal McEachran, Montreal Veterinary College ; and a few others.

Dr. R. P. Howard, the Dean, then read the following report:—

The total number of students enregistered in this Faculty during the past year was 231, of whom there were from

Ontario	112	P. E. Island	6
Quebec	56	Newfoundland	2
New Brunswick	23	Manitoba	1
Nova Scotia	19	England	1
United States	11		

The following gentlemen, 46 in number, have passed their Primary Examination, which comprises the following subjects: Anatomy, Practical Anatomy, Chemistry, Practical Chemistry, Physiology, Histology and Botany.

Aborn, W. H	Goderich, O.
Baer, D. C	Summerfield, Ill.
Bell, J. H.; B. A	Kars, O.
Bowen, W.; B. A	Quebec, Q.
Brown, G. A	Charlottetown, P.E.I.
Berry, J. A	Seeley's Bay, O.
Cameron, J. J	Lancaster, O.
Castleman, A. L	East Williamsburg, O.
Campbell, G. G.; B. Sc	Truro, N. S.
Chalmers, W. W.; B. A	Huntingdon, Q.
Creasor, J. C.; B. A	Owen Sound, O.
Delaney, W. J	Peterboro, O.
Dewar, C. P	Ottawa, Ont.
England, W. S	Dunham, Q.
Garrow, A. E	Ottawa, Ont.
Gemmill, E. W	Almonte, O.
Goodwin, W. W	Baie Verte, N. B.
Holmes, A. D	Chatham, O.
Hopkins, F. A	Cookshire, Q,
Lafferty, A. M	Perth, O.
Kincaid, R. J	Fredericton, N. B.
Martin, J. Mc	Brown's Creek, P.E.I.
Mathieson, C. S	Harrington, P.E.I.
Morehouse, O. E	Upper Keswick, N. B.
Mowat, M. M	South Branch, O.
Muirhead, D. A	Carleton Place, O.
Murray, D. A	Pictou, N. S.
McDonald, A	Mongenais, Q.

McDonald, A. L	Glendonald, O.
McDonald, H. N	Laggan, O.
McDonald, P. A	Alexandria, O.
McCurdy, T	Ormistown, Q.
McIntosh, D. H	Carleton Place, O.
McLellan, A. A	Summerside, P.E.I.
McKinnon, T. H	Lockport, N. S.
McKercher, H	Stittsville, O.
Porter, J. A.; B. A	Kemptville, O.
Philp, W. S	Montreal, Q.
Quirk, E. L	Aylmer, Q.
Shanks, A. L	Huntingdon, Q.
Stewart, W. G.; B. A	Arundel, Q.
Taylor, W. B.; B. A	Halifax, N. S.
Vipond, A. E	Montreal, Q.
Whyte, J. J	Lancaster, O.
Woodruff, T. A	St. Catherines, O.
Young, H. E., B. A	Napanee, O.

The following gentlemen, 45 in number, have fullfilled all the requirements to entitle them to the degree of M.D., C.M. from the University. In addition to the Primary subjects mentioned, they have passed a satisfactory examination, both written and oral, on the following subjects: Principles and Practice of Surgery, Theory and Practice of Medicine, Obstretrics and Diseases of Women and Children, Pharmacology and Therapeutics, Medical Jurisprudence, Pathology and Hygiene,—and also Clinical Examinations in Medicine and Surgery conducted at the bedside in the Hospital:

Aborn, W. H.	Goderich, Ont.
Berry, J. A.	Seeley's Bay, Ont.
Blackadder, E. H. P., B.A.	Montreal, Que.
Boone, S. W., B.A.	Fredericton, N. B.
Bowen, W., B.A.	Quebec, Que.
Boyd, Jay	Vankleek Hill, Ont.
Cameron, K	Montreal, Que.
Christie, W	Lachute, Que.
Cowie, A. M	Montreal, Que.
Dickson, J. A	Trenholme, Que.
Easton, C. L.	Easton's Corners, Ont.
Edgar, C. J.	Napierville, Que.
Ellis, W. E.	St. Catherines, Ont.
Evans, E. J	Seaforth, Ont.
Flagg, J. D	Morrisburg, Ont.
Fillmore, E. W	Baie Verte, N. B.

Fraser, J. M	Hawkesbury, Ont.
Gardner, A. W	Cornwall, Ont.
Hall, A. G	Franklin, Que.
Hall, W	Walkerton, Ont.
Hamer, A. L	Bradford, Ont.
Johnson, J. W	Farmersville, Ont.
Kelly, J. A. A	Durham, Ont.
Lafferty, A. M	Perth, Ont.
Lafleur, H. A., B.A	Montreal, Que.
Loucks, W. F	Stirling, Ont.
Macdonald, A. D	Wickham, N. B.
McDonald, A. L	Glendonald, Ont.
McDonald, D. D	North Lancaster, Ont.
McKinnon, H	Alexandria, Ont.
Morgan, V. H	Aultsville, Ont.
Norman, T. J	Schonberg, Ont.
Porter, J. A., B.A	Kemptville, Ont.
Potheir, J. C	Woonsocket, R. J.
Reavely, E	Port Robinson, Ont.
Richardson, G. C	South March, Ont.
Ross, D. L	Winthrop, Ont.
Scott, J. M	Philadelphia, Penn.
Scully, D. J	Lindsay, O.
Stephen, G. C	Montreal, Q.
Trapnell, H. E	Harbor Grace, Nfld.
Warneford, P. H	Norton, N. B.
Wilkins, H. P	Toronto, O.
Williams, E. P	Ottawa, O.
Young, A. A	Barton, Vt.

The following have passed in Chemistry:

Aylen, W. W.
Burritt, C. H.
Broderick, E. J.
Clarke, J. W.
Campbell, G. M.
Evans, D. J.
Esson, F. G.
Hewetson, J. A.
Kemp, H. D.
Lang, M. W.
Low, D.
McKee, G. L.
McManus, H. D.
McEwen, H.
Metcalfe, F. T.
Ross, J.
Smithson, R. H.

The following have passed in Practical Chemistry:

Aylen, W. W.
Beers, A. H.
Burritt, C. H.
Broderick, E. J.
Campbell, G. M.
Deacon, J. D.
Duncan, G.
Halpine, A. S.
Irwin H.
Low, D.
Lewin, A. A.
McManus, H. D.
McKee, G. L.
McNeece, J.
Ross, J.
Smithson, R. H.
Travers, J. B.
Weeks, C. M.
Woodruff, H. E.

The following have passed in Anatomy :

Baer, D. C.
Booth, J.
Esson, F. G.
Haldimand, A. W.
Hewetson, J. A.
Irwin, W. T.
Kincaid, R. J.

The following have passed in Pharmacology and Therapeutics :

Baer, D. C.
Bayne, C. W.
Bell, J. H.
Berry, R. P.
Bradley, W. I.
Castleman, A. L.
Chalmers, W. W.
Clouston, J. R.
Conroy, C. P.
Desmond, F. J.
Fritz, H. D.
Gemmill, E. W.
Goodwin, W. W.
Green, T. J.
Gunne, N. D.
Hewitt, J.
Hoare, C. W.
Hopkins, H. J.
Hubbard, O. H.
Irwin, W. T.
Kemp, H. D.
Kennedy, J. H.
Kenny, F. L.
Kirkpatrick, E. A.
Kincaid, R. M.
Lang, M. W.
Long, C. H.
Metcalf, F. T.
Moffat, R. D.
Mowat, M. Mc.
Morrow, C.
McCarthy, J. G.
McDougall, D. S.
McEwen, H.
Macdonnell, Æ. J.
McKinnon, G. W.
McIntosh, D. H.
McLennan D.
McMartin, D. R.
McFarlane, M.
Orr, A. E.
Orr, J. E.
Park, P. C.
Potts, J. Mc.
Robertson, A. G.
Springle, J. A.
Stewart, A. D.
Stewart, W. G.
Thompson, J. H.
Weagent, A. A.
Westley, R. A.
Wetmore F. H.
Wylde, C. F.

The following have passed in Pathology :

Baer, D. C.
Bell, J. H.
Berry R. P.
Berry, J. A.
Bowen, W.
Cameron, J. J.
Cameron, K.
Castleman, A. L.
Clouston, J. R.
Conroy, C. P.
Davis, A. H.
Desmond, F. J.
Ferguson, W. D.
Fritz, H. D.
Gunne, N. D.
Hall, A. G.
Haldimand, A. W.
Hopkins, H. J.
Hubbard, O. H.
Kenny, F. L.
Kennedy, J. H.
Kincaid, R. M.
Kirkpatrick, E. A.
Lafleur, H. A.
Lang, M. W.
Long, C. H.
McCarthy, J. G.
McKinnon, G. W.
McDougall, D. S.
McFarlane, M. A.
McLennan, D.
McMartin, D. R.
Moffatt, R.
Morrow, C.
Orr, A. E.
Orr, J. E.
Porter, J. A.
Park, P. C.
Potts, J. M.
Robertson, A. G.
Quirk, E. L.
Springle, J. A.
Stewart, W. G.
Stewart, A. D.
Thompson, J. H.
Weagant, A. A.
Westley, R. A.
Wetmore, F. H.
Wylde, C. F.

The following have passed in Physiology:

Aylen, W. W.
Booth, J. S.
Hewetson, J.
Haldimand, A. W.
Irwin, W. T.
Kincaid, R. J.
Low, D.
Moffatt, R. D.
McEwan, H.
Smithson, R. H.
Wheeler, C. L.

The following have passed in Medical Jurisprudence:

Baer, D. C.
Bayne, C. W.
Bell, J. H.
Bowen, W.
Berry, R. P.
Clouston, J. R.
Cameron, J. J.
Castleman, A. L.
Chalmers, W. W.
Conroy, C. P.
Deacon, J. D.
Desmond, F. J.
Dewar, C. P.
Donald, W. M.
Dickson, J. A.
Fritz, H. D.
Gardner, A. W.
Greene, T. J.
Gunne, N. D.
Goodwin, W. W.
Hewitt, J.
Hopkins, H. J.
Hubbard, O. H.
Hoare, C. W.
Hall, A. G.
Irwin, W. T.
Kincaid, R. M.
Kenney, F. L.
Kirkpatrick, E. A.
Kennedy, J. H.
Long, C. H.
Lang, M. W.
Morrow, C.
Mowat, M.
Metcalfe, F. T.
McCarthy, J. G.
Macdonnell, Æ. J.
McDougall, D. S.
McEwen, H.
McFarlane, M.
McLennan, D.
McMartin, D. R.
Moffatt, R. D.
Orr, A. E.
Orr, J. E.
Porter, J. A.
Potts, J. M.
Park, P. C.
Quance, S. H.
Quirk, E. L.
Robertson, A. G.
Stewart, A. D.
Stewart, W. G.
Stephen, G. C.
Travers, J. B.
Woodruff, E. H.
Wylde, C. F.

The following have passed in Hygiene:

Baer, D. C.
Bayne, C. W.
Bell, J. H.
Castleman, A. L.
Chalmers, W. W.
Clouston, J. R.
Deacon, J. D.
Dickson, J. A.
Donald, W. M.
Irwin, W. T.
Kemp, H. D.
McDougall, D. S.
McEwen, H.
McLennan, D.
Porter, J. A.
Quance, S. H.
Robertson, A. G.
Shanks, A. L.
Stayner, S. R.
Stewart, A. D.
Stewart, W. G.
Travers, J. B.
Vipond, A. E.
Weeks, C. M.
Woodruff, E. H.
Wylde, C. F.

The following have passed in Botany:

Addy, G. A.
Ault, C. A.
Beers, A. H.
Bisset, C. P.
Bowes, E.
Harris, N. M.
Hickey, W. H.
Inksetter, W. E.
Jento, C. P.
Jenkins, W. E.
McKee, G. L.
McLennan, A.
McNeece, J.
Noble, C. T.
Oliver, O. J.

Campbell, G. M.
Clune, P. J.
Coleman, A. H.
Corbin, F. G.
Curtis, J. B.
Esson, A. C.
Evans, D. J.
Garrell, A. S.
Hamilton, H. D.
Kent, H. V.
Liddell, G. L.
Love, A.
Main, C. G.
Morris, O.
Murray, M. W.
Mulligan, E.
McDonald, M, S.
McKechnie, R. E.
Robertson, W.
Smith, A. G.
Thompson, F. E.
Treadwell, H. S.
White, D. D.
Weeks, C. M.
Wilson, W. A.
Yorston, F. S.

The following have passed in Histology:

Ault, C. A.
Addy, G. A.
Burritt, C. H.
Bell, J. H.
Bayne, C. W.
Broderick, E. J.
Bissett, C. P.
Bowes, E.
Campbell, G. M.
Clune, P. J.
Corbin, F. G.
Clarke, J. W.
Chalmers, W. W.
Coleman, A. H.
Curtis, J. B.
Esson, A. C.
Evans, D. J.
Hickey, W. H.
Hewiston, J.
Haldimand, A. W.
Harris, J. W.
Harris, N. M.
Hamilton, H. D.
Irwin. H.
Inksetter, W. E.
Jento, C. P.
Jenkins, W. E.
Kent, H. V.
Liddell, G. L.
Love, A.
Morris, O.
Murray, M. W.
Main, C. G.
Matheson, C. S.
Mulligan, E.
McKee, G. L.
McLennan, A.
McManus, H. N.
McKechnie, R.
McDonald, M. S.
McNeece, J.
Noble, C. T.
Oliver, O. J.
Robertson, W.
Ross, J.
Smith, W. D.
Smith, A. G.
Thompson, F. E.
Wilson, W. A.
White. D. D.
Travers, J. B.
Yorston, F. S.

MEDALS, PRIZES AND HONOURS.

The Holmes Gold Medal, for the best Examination in all the Branches comprised in the Medical Curriculum, is awarded to Edward Evans, of Seaforth, Ont.

The Prize for the best Examination in the Final Branches is awarded to Henri A. Lafleur, of Montreal.

The Prize for the best Examination in the Primary Branches is awarded to Alexander E. Garrow, of Ottawa, Ont.

The Sutherland Gold Medal is awarded to John Creasor, of Owen Sound, O.

The following gentlemen, arranged in order of merit, deserve honourable mention :—

In the Primary Examination—H. McKercher, G. G. Campbell, J. A. Creasor, W. S. England, W. G. Stewart, H. E. Young, D. H. McIntosh, G. A. Brown, D. A. Murray.

In the Final Examination :—J. M. Fraser, J. A. Kelly, L. D. Ross, W. Hall, A. L. Hamer, T. J. Norman, A. D. McDonald, W. Christie, E. H. P. Blackader, and J. W. Johnson.

PROFESSOR'S PRIZES.

BOTANY.—Robert McKechnie, Winnipeg.

PRACTICAL ANATOMY.—Demonstrator's Prizes : 2nd year, W. G. Stewart. 1st year, R. McKechnie.

OBSTETRICS.—Ed. Evans, Seaforth, Ont.

PATHOLOGY—O. H. Hubbard, Gilsam, New Hampshire.

After the oath had been administered, the newly-fledged doctors were " capped" by Principal Dawson.

DR. BULLER then delivered the farewell address to the students. (*See page* 577.)

DR. A. D. MCDONALD, of Wickham, N.B., then delivered the

VALEDICTORY ADDRESS

on behalf of the Class who were about to leave their Alma Mater. After speaking of the vicissitudes and pleasures of college life, he referred to the Class of '87. He said he spoke not of men who were going to the world to make a name, but as friends in the class of '87, whom the tie of friendship, he hoped, would fondly bind them together as long as life remained. (Applause.) In a humorous manner he spoke of the difficulties of a medical student and the trouble they sometimes had in finding a suitable boarding-house ; so serious were those difficulties that some of his class never ventured to say they were medicals when applying to the landlady, but rather preferred the appellation of theological students of McGill, and they were always received with open arms. (Laughter.) This, he thought, was an injustice to the medical students. (Laughter.) In conclusion, he thanked the Dean and Professors for the kindness they had shown the class of '87, for the trouble they had taken with them, and for the knowledge they communicated to them during their four years at the college. The students of McGill would remember their Alma Mater, and act up to the good example they received. (Applause.)

NOTES AND COMMENTS.

With the return of Spring comes the annual worry of examinations. It has never been my good fortune to be connected with an institution which relieved the teachers of the responsibility of examining the students they have taught. I suppose such a duty should not be a worry, but it is in certain ways, particularly if one has both a heart and a conscience. A class may be divided into three groups; the very good men, who reach 80 per cent. and over; the average men, who get over 60 per cent.; and the indifferent and bad, who fall below 50 per cent. My experience has been that about 15 per cent. of candidates are 1st class, at least 60 per cent. are 2nd class, and from 20 to 25 per cent. 3rd class. With the men of the last group come sorrow and anxiety for the examiner. As a teacher of these men, seeing them for two sessions in his class, knowing them and their defects personally, he is not, as a rule, the proper person to examine. He will either pity and be over lenient, or he will dislike them and be too severe. To mete out strict justice in such cases is a most difficult task, and knowledge of a man and of his circumstances often give a bias to the judgment. If to the task of teacher is added that of examiner, the responsibilities of the two positions should be clearly understood. I have been in the habit of telling my students that with the last lecture my duty to them ceased, and that as examiner I undertook duties for the University and the public which had to be discharged as thoroughly and as impartially as the college work.

To reject a man in his final examination is no light matter. In every faculty there are one or two members so kind-hearted that they cannot *pluck* a candidate. Sympathy for the man excludes all sense of justice. A lively sense of responsibility to the public admits of no such sentiment, and if there is an occasion which demands strictness and firmness, it is when we are asked to decide whether or not a man is fit to take charge of the lives of his fellow-creatures. In case of doubt, give the public the benefit; better one man to suffer than to allow dozens to run the risks of his incompetency. Yet, as was well said by a writer in the *Lancet* a few years ago, " the rejections at examinations, necessary as they may be in the common interest, represent a sum of lost time, lost labor, wasted money, defeated hopes and poignant disappointment, experienced by candidates and their friends, which no one but an anti-vivisectionist can think lightly of." Fortunately, at a majority of the Canadian colleges it does not rest with the examiners for the *degree* to determine the fitness of the candidate to practice, as the Provincial Licensing Boards relieve the university professors of this responsibility. This is as it should be, and I am glad to see that a Central Board of Examiners is to be established in the Province of Quebec.

The Germans are far ahead of us in this matter. The M.D. degree from Berlin, Leipzic or Bonn carries with it no permission to practice. The candidate must first pass the *Staats-examen*, which he dreads much more than the university test. It corresponds exactly with the examination of the Canadian Provincial Boards. There is this difference, however: in Germany the government appoints the examiners, while under our democratic institutions the incorporated profession nominates. The *Staats-examen* of Germany is a model which medical boards everywhere might follow. It is eminently practical and thorough; the candidate is allowed ample time, and he must show fitness in all clinical details. Take, for example, the examination in medicine, which must be conducted in a hospital by two examiners. The regulations (summarized) are:—1*a*. On each of two following days the candidate must examine a patient in the presence of the examiners, obtain all the details of the case, and the next morning present a critical review of the same. 1*b*. The two patients are to be visited daily for seven days, careful notes taken, and a supplementary report presented to the examiners. Candidates are also required to undergo a practical examination in diseases of children, mental affection and prescribing. In the other branches the same practical methods are followed. Heretofore at the Provincial Boards there has been a difficulty in carrying out fully the practical examinations. In Ontario, the new and commodious building of the College of Physicians and Surgeons will enable the Council to have suitable rooms for the chemical, anatomical and pharmacological examinations, and the Toronto Hospital will furnish ample material for the clinical tests.

Examining is monotonous, brain-consuming work, relieved only by exceptionally able answers of first-class men and the profoundly stupid replies of some of the third class men. For several years I kept notes of the amusingly stupid answers, but they have been mislaid. I have rarely had one which displayed the man more fully than the following in reply to the question (written) "How to treat hæmoptysis"? "*Plug the cavity with cotton saturated with a solution of Monsell's solutions, dry*"!!

WILLIAM OSLER.

Personal.

Dr. Robert Barnes has been elected an Honorary Fellow of the Chicago Gynæcological Society.

Olshausen of Halle has accepted the invitation to fill the chair of Midwifery in the University of Berlin.

Sir Wm. Jenner has been elected for the seventh time to fill the office of President of the Royal College of Physicians.

Prof. Matterstock has been appointed Director of the Medical Clinic in the University of Wurzburg. He succeeds the late Prof. Geigel.

Medical Items.

—The American Medical Association will meet in Chicago on June 7th, 8th, 9th and 10th.

—Dr. Arlt, the famous ophthalmologist, died recently in Vienna after a lingering illness. He was for half a century one of the foremost of continental ophthalmic surgeons.

—Dr. D. Rutherford Haldane died at his residence in Edinburgh on April 12th. For many years Dr. Haldane was a prominent teacher of medicine in the Extra-mural School of Edinburgh.

—The Ontario Medical Association meets in Toronto on Wednesday and Thursday, the 8th and 9th of June, under the Presidency of Dr. Richardson of Toronto. Dr. Arnott of London will open a discussion on "Phosphaturia." Dr. Taylor of Goderich will read a paper on the "Functional Paralysis of Pregnancy." Dr. Lett, superintendent of the Homewood Retreat in Guelph, will deliver an address on "The Relations of Insanity to Masturbation."

—Professor: "Where do we find squamous epithelium?" Student: "The favorite situation is the squamous portion of the temporal bone." Professor: "Ah, indeed! then what does the professor of dermatology mean when he speaks of squamous skin disease?" Student: "Oh! yes, sir. I forgot. We find that variety of epithelium most common in certain affections of the skin." Professor: "Shades of Dalton!"

—The following exemplifies the advisability of using a special preparation in many cases requiring expensive drugs:—"Four ounces of a mixture of bromide of potassium and chloral, each an ounce, with tincture of hyoscyamus and fluid extract of cannabis indica, in appropriate doses, were ordered, with directions to take one teaspoonful every hour until sleep should be induced. An ugly, muddy mixture was received, which produced nausea and headache, but no sleep. A similar prescription, instead of the above extemporaneous officinal combination, was ordered, only 'Battle's *Bromidia*' was designated, which induced refreshing sleep after a few doses of from 20 to 30 drops had been taken."—*Dr. W. B. Hazard in Medical Brief for December.*

CANADA

MEDICAL & SURGICAL JOURNAL

JUNE, 1887.

Original Communications.

LOCALIZED URÆMIC CONVULSIONS.

BY J. F. WILLIAMS, M.D.,
Resident Medical Assistant, General Hospital, Nottingham, England.

J. S., aged 42, laborer, admitted on Nov. 8th, 1886, under the care of Dr. Ransom, with swelling of legs and abdomen. Had always been a healthy man; worked as a laborer all his life. He gave no history of rheumatism, alcoholism or scarlatina; no evidence of syphilis. Six months before admission he had the ordinary symptoms of acute nephritis; this was followed by several attacks of what he called "colds," at each time his urine diminishing in amount and of a darker color. Five months later, a month before admission, he had a severe attack, followed by general anasarca; he then had to give up work.

On admission, he was fairly well nourished, but anæmic; tongue clean; appetite good; no diarrhœa; no headache. Pulse full, rather high tension, 52; respirations 22; temperature 98° to 99.4°. General anasarca, with ascites.

He passed 34 ounces of urine the first twenty-four hours, which was faintly acid, high color, specific gravity 1012, slight deposit. It contained 80 per cent. (bulk) of albumin on boiling, numerous blood cells, leucocytes, granular debris, and a few hyaline casts. His heart gave evidence of hypertrophy, though the apex beat was not displaced. At apex a systolic murmur was heard propagated a short distance into axilla; a diastolic murmur heard at aortic cartilage and down sternum. He was treated in the usual way.

On Nov. 27th the nurse noticed he was not as bright as usual. On the evening of the 29th he had severe convulsion of left upper extremity lasting twenty minutes. At 4 a.m. had another convulsive attack similar to the first. This came on suddenly, and consisted of violent convulsive movements, clonic spasm, confined to left upper extremity and muscles at back of neck on left side, and some twitching of muscles on right side of face. During this attack, which lasted fifteen minutes, he did not loose consciousness; said it appeared to begin in muscles at shoulder and travel up to head; he had no control over the spasms. The attack ceased suddenly, leaving no paralysis in the arm, but diminished power; speech was slow and somewhat indistinct, and there was fairly well marked right facial paralysis. No evidence of paralysis elsewhere. The facial paralysis lasted for two days, passing gradually away. Up to this time he had no diarrhœa, neither did he complain of headache.

On Nov. 30th he had two similar attacks, lasting the same time; on Dec. 1st, two more; on Dec. 2nd, one. Diarrhœa now began.

On Dec. 4th, had two very severe attacks, lasting 40 minutes each. These began in left upper extremity and muscles at back of neck, then extended to right leg, were violent and accompanied with twitching of right arm. He appeared to be conscious during these, but bit his tongue, which was probably owing to the violent jerking of his head. After the last passed off, the sphincters were relaxed.

Between the 4th and 11th he had several attacks, lasting from ten to fifteen minutes, all confined to left upper extremity, without loss of consciousness. During the forenoon of the 11th had three similar attacks at short intervals. He was conscious and rational at 3 p.m., but not after; died at 5 p.m.

Autopsy forty hours after.—Heart weighed 17½ ounces; muscle rather pale and flabby; ventricles dilated; mitral orifice dilated: right cusp of mitral eroded and thickened, which condition extended to contiguous aortic cusp, involving it. The other two aortic cusps were united by a calcareous plate. Lungs were œdematous, right lung adhering throughout, adhesions being of recent date. Liver weighed 66 ounces; substance firm. Kidneys weighed nine ounces each, and were fair specimens of the large white kidney. Brain weighed 52 ounces; slight congestion over motor area; vessels at base normal; membranes easily stripped off. On section, ventricles contained a fair amount of fluid; brain substance quite normal, there being no naked eye lesion to account for the convulsions.

Remarks.—The nature of this case was evident from the history and condition whilst under observation, but it is interesting to know, since the localizing of cerebral lesions is being so thoroughly investigated, that localized convulsions without loss of consciousness occasionally occur when there is no organic lesion in the brain. Bright, in 1836, first pointed out the occurrence of convulsive attacks, limited to some particular part of the body, without loss of consciousness, which he looked upon as proof of an organic lesion. Trousseau, in his work on Clinical Medicine, has recorded a case of what he called partial epilepsy, in which convulsions of one side of the face occurred unaccompanied by loss of consciousness; also a case of eclampsia, in which the convulsions affected the whole left side of body, leaving an incomplete hemiplegia which lasted an hour. In this case consciousness was not lost. So rarely has this been observed that Hilton Fagge, in his recent work, states; "We seldom meet with an exception to the rule that there is local disease of the brain in all cases in which attacks of clonic spasm recur paroxysmally without loss of consciousness."

That paralysis may occur in uræmia is now generally recognized. Two cases of uræmic hemiplegia were recently reported in the *British Medical Journal*. The paralysis is always of short duration, which favors the view that it is dependent on overwork of the nerve fibres passing to the muscles which are convulsed.

NOTES ON URINALYSIS.

By Thos. D. Reed, M.D.,
Prof. Materia Medica, Montreal College of Pharmacy, &c., &c.

The immense importance, diagnostically and prognostically, of an analysis, qualitative and quantitative, of the urinary secretion being now universally recognized, chemists and clinicians alike have expended much thought and time in experimentation, in devising simple and reliable tests suitable for use by the general practitioner, not possessing special technical skill nor laboratory facilities, and who might not always have at hand the services of a skilled chemist.

Specific Gravity.—For taking specific gravity, a series of beads thrown into a small quantity of the liquid constitute the simplest and most rapid method, and it is hardly possible to conceive anything better, no special vessel being required.

Albumin.—For albumin, the picric acid and heat test, as recommended by Johnston, is most valuable, and is as simple as any other, with the advantage of portability, in the dry state, and independence of the corrosive nitric acid, so destructive to clothing and instruments. The special committee on albumin tests of the Clinical Society of London reported, in 1886, that no one of the tests heretofore proposed had any marked excellence over all others, and that the nitric acid was as good as any.* The only method practically available for the quantitative estimation of albumin is the approximative one of measuring the depth of the deposited opaque layer; for this purpose, graduated glass tubes are now procurable from the dealers in chemical apparatus. The gravimetric and optical processes, requiring time, skill and special appliances, are unsuitable for ordinary clinical work.

Glucose.—It is in the search for saccharine matter, probably, that most difficulties and mistakes have occurred. Perusal of the text-books and current medical literature is somewhat confusing, and would almost lead one to suppose that the discovery and identification of glucose in urine were matters of much difficulty and uncertainty, and that the path of the uro-analyst was full of pitfalls, new tests being constantly brought forward to replace those previously used, which are described as defective. According to my own experience, the difficulty is not in failing to get reactions when there is a distinct amount of sugar present; but the fact of misleading reactions due to other elements, no sugar being present, is familiar to most investigators. Chemical authorities generally give the preference to the copper test, in the form known by its admirers as the "unfailing Fehling." The objections to this test are that it is unstable, and the list of possible compounds which might cause a decomposition is a long one.[*] That it is unstable is well known, because it contains an organic acid, and none of the various plans which have been suggested to make a permanent solution are quite satisfactory. Hence, although it may be trusted in experienced hands, it does not quite meet the requirements of the busy practitioner. Fermentation being the only incontrovertible evidence of the presence of saccharine matter, is just what is wanted for positiveness,[†] and the method of Roberts, by taking the specific gravity before and after treatment with yeast, is used with much confidence. Instruments have been constructed in which the evolved carbonic acid could be measured, but these have not come into general use on account of complexity and requiring the use of mercury or other heavy fluids as valves. An ingenious little instrument, figured in engraving, has been contrived by Einhorn of New York, which requires only the pouring of a measured quantity of urine, mixed with a little yeast, into a graduated bent glass tube, a process so simple as to be trusted to an intelligent patient or nurse, and the indications can be read off just like reading a thermometer. I have tested this instrument with liquids of known strength, and my colleague, Prof. J. Bemrose, F.C.S., has compared its indications with those obtained by the Fehling's liquor process, and also with the readings given by a very superior polariscope, the result being that we find it extremely easy and sufficiently accurate for clinical purposes. Its use is more satisfactory than the Roberts' process, from the fact that the volume of the gas is clearly visible, and it is sensitive to much smaller quantities of sugar.

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* *Vide* Millard, N. Y. Medical Record, April 30, 1887.

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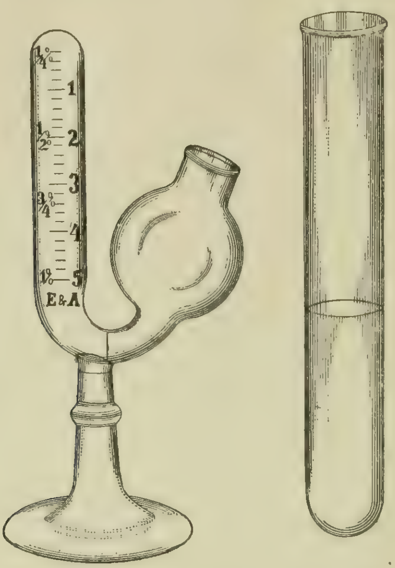
[*] *Vide* Leo in International Medical, April, 1887: also Johnson, British Medical Journal, Jan. 8, 1887.

[†] *Ibid.*



Von Jaksch sent me some time ago a reprint from the *Prager Wochensch.*, relating a case where he had failed to find sugar with previous tests, and which was only discovered by Von Fischer's test, phenylhydracin. As this compound was not procurable here, I had a little made for me, and for which I am indebted also to Prof. Bemrose. The trials of it, however, have not been satisfactory ; it requires prolonged boiling and subsequently the use of the microscope to identify the crystalline deposit, hence it has not come much into use.

Johnson's color test with picric acid and alkali is excellent for qualitative estimation, but is not so satisfactory for indicating the quantity. It has the objections of all color tests, that differences of tint are not equally recognized by all eyes. The latest color test is alpha-napthol. The extreme sensitiveness of this reagent I can confirm, although I did not carry the dilution as far as it is claimed it may be, namely, ·00001 per cent.,* or one part in ten millions!! Such excessive sensitiveness has the disadvantage that all urines give the reaction, due to the fact, perhaps, that a minute quantity of sugar is always present. Certainly one grain of sugar passed in *one year* cannot have the slightest significance pathologically.

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* *Vide* Philadelphia Medical News, Sept 25, 1886.

Urea.—The estimation of the urea is now known to be of considerable importance and assistance in diagnosis in certain cases, as internal malignant disease. The amount can be ascertained immediately and without trouble by a ureometer, consisting of a glass tube graduated to indicate grains per ounce, as I have indicated on a previous occasion.†

Cystine.—This rare body generally requires both chemical tests and the microscope for its recognition. A case is reported where, after injections containing iodoform, hexagonal crystals of the latter, resembling cystine, were found in the urine, and were at first mistaken for it.

Figurate Elements.—For these the microscope is indispensable; and staining, as with iodine, anilines, or osmic acid, is a great advantage.

In conclusion, it cannot be too strongly nor too often impressed upon the young practitioner that a thorough examination of the urine is of paramount importance in every case of sickness in which the diagnosis is not perfectly clear. Life insurance examiners often make unexpected discoveries.

CASES IN PRACTICE.

By J. A. Hutchinson, M.D., of Brussels, Ont.

Case I—*Partial Atresia Vaginæ.*—On the 8th April, 1887, Miss N. consulted me in regard to a small growth from the meatus urinarius. Upon examination it was found to be an irritable urethral caruncle about the size of a plum-stone. When examining the case I was surprised also to find that the vagina was almost completely closed by a membrane passing across near its outlet. This membrane had near its centre a small opening about the size of an ordinary pea. The caruncle being so irritable it had to be removed at once, and I decided to operate on the membrane closing the vagina while the patient was under ether. A few days later this was done. After Dr. Graham had etherized the patient, the caruncle was detached and the bleeding stopped by fuming nitric acid. The membrane had now to be dealt with. By using a three-bladed rectal speculum, which put the membrane on the stretch, the small opening was enlarged by cutting it forwards and backwards sufficient to enter the point of the instrument. It was then dilated by gradually opening the instrument until the vagina was completely pervious. The membrane was about the thickness of a common pane of glass. The bleeding was easily controlled. The vagina was then plugged by absorbent cotton saturated with a weak solution of corrosive sublimate. The greater part of the membrane afterwards sloughed away. A month later the vagina was in a normal condition and almost fully healed. The patient was not aware that there was anything abnormal until told so at the time of the examination of the caruncle. Menstruation had always been regular and painless, the small opening being sufficient to allow of the free passage of the menstrual fluid. No cause could be assigned for the atresia, and I think it was most likely congenital. The young woman had always good health, and never had any accident or illness to give rise to this malformation.

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† *Vide* Canada Medical and Surgical Journal, August, 1885.

CASE II—*Open Safety-pin Swallowed.*—About twelve months ago an infant aged four months, living near Brussels, accidentally swallowed an open safety-pin 1¼ inches long. From the parents' statements it would seem that the pin was for a short time lodged in the œsophagus, but evidently reached the stomach in about ten minutes, when the infant's struggles ceased. Medical advice was applied for, but as the babe was not then suffering, it was deemed best to await events and give only mild aperients and its ordinary nourishment. For the next eleven months the patient suffered at times with severe abdominal pains, and then passed the pin per rectum.

REMOVAL OF A FOREIGN BODY FROM THE NOSE SEVEN YEARS AFTER INTRODUCTION.

By George W. Major, B.A., M.D., &c.,
Specialist to the Department for Diseases of the Nose and Throat, Montreal General Hospital; Instructor in Laryngology and Diseases of the Throat, McGill University, Montreal, Canada.

Rhinoliths or nasal calculi are formed by the collection of the alkaline salts of the nasal secretions about foreign bodies which have become impacted in the nasal passages. The following case is of especial interest from the great length of time during which the foreign substance was allowed to remain *in situ* :—

On March 2nd, V. G., aged nine years, was brought to me for advice and treatment for an offensive nasal discharge confined to the right nostril. The disease had already lasted seven years, and was gradually becoming more troublesome. The secretions were extremely irritating and maintained a continual excoriation of the upper lip.

On inquiry as to the possibility of the presence of some foreign substance, I was informed that a button had been introduced into the nose seven years before, but that after an interval of some weeks or months had elapsed it had been removed by surgical interference.

On examining with a probe I could feel diseased bone on a line with the lower turbinated bone at its posterior third. The nostril bled freely on the slightest provocation, and the nasal membrane generally was inflamed and very sensitive. I removed several small spiculæ of bone, and ordered local cleansing. At a subsequent sitting I incised the redundant mucous membrane over the region in which I could feel a large mass with a rough surface, but which was not freely, if at all, movable. After incising I grasped the body with polypus forceps, and using a swaying movement with gentle traction I succeeded in withdrawing an irregularly oval substance considerably larger than a white bean. When soaked in water and the crust removed, the nucleus was found to be an oval metallic boot-button with a copper disc-shank, made on the same principle as an ordinary shirt-stud or collar button. The composition of the incrustation was, as usual, mucus and phosphate of lime. This button was introduced at the same time as the first one before alluded to as previously removed in England, and the father of the young lady recognized it at once as similar. It had been covered with enamel, but this had disappeared during the period of detention. The necrosed tissue has since come away, and the health of the nostril is completely restored.

The button was firmly impacted between the lower turbinated bone and the floor of the nose, and had become imbedded in the mucous membrane.

In cases where *an offensive or any discharge is confined to one nostril the presence of a foreign body should always be suspected* and looked for, and chloroform or ether should be employed to secure a thorough and searching investigation. The patient should also be examined again after an interval of some days, during which any local inflammation has had a chance to subside.

QUARTERLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

Prepared by Wm. Gardner, M.D.,
Professor of Gynæcology, McGill University; Gynæcologist to the Montreal General Hospital.

Death from Sublimate Poisoning after two Vaginal Injections.—In view of the frequency with which, nowadays, this agent is employed as a prophylactic and curative remedy, the case here recorded is of extreme interest. Since 1885 corrosive sublimate has been used in Breisky's clinic at Prague, except in cases with renal and intestinal troubles and in anæmic and badly nourished women. Up to August 28th of last year 1620 cases were so treated, with no bad result till the following: The woman, aged 17, primipara, had enjoyed good health during pregnancy and been free from all renal symptoms. On the first day of her labor (Aug. 28th) the vagina was douched with 1–2000 sublimate before and after a vaginal examination. Prior to this a small quantity of bloody slime had passed from the vagina. After the second douche pain was felt in the lower part of the abdomen with vomiting and diarrhœa. Carbolic douche was now employed and laudanum given for the diarrhœa. The child was born on the 29th, the vagina being douched with carbolic lotion after expulsion of the placenta, and catgut sutures applied to the perineal and vestibular tares. The puerperium was briefly as follows: August 29th (afternoon)—Six fluid motions, salivation, scanty urine. 30th—Gums spongy; grayish-white spots below the tongue; throat congested; urine scanty and albuminous, with hyaline and granular casts; kidney and bladder epithelium, and broken-down red-blood corpuscles. The diarrhœa and scanty urine continued, tympanitis began on the 31st, and death from coma occurred on September 5th, eight days after the use of the sublimate. Post-mortem examination showed acute Bright's disease, dysentery, ulcerated stomatitis and pharyngitis, parenchymatous degeneration of the myocardium and liver, pneumonia, acute cystitis, and imperfect involution of the uterus.

Fleischmann discusses this case and comes to the conclusion that corrosive sublimate poisoning had occurred, the sublimate passing into the circulation through small lesions of the mucous membrane at the internal os. He believes with Thorn (Volkmann's *Samml.*, No. 250) that corrosive sublimate should never be used for vaginal or uterine douching, but only for the surfaces of the skin, and by a medical man. Carbolic acid should be employed as a substitute in the former instances.

At the British Gynæcological Society on the 10th of last November, Dr. Granville Bantock of London read a paper "*On Vaginismus.*" Dr. Bantock limits the term to cases in which there is no imflammation, erosion or ulceration of the vulva or vagina, but a morbid condition of the uterine body or cervix, or a displacement, and that the spasm at the mouth of the vagina which renders coitus impossible and digital examination almost equally so, is a reflex spasm. Dr. Bantock reported six cases which were mostly cured by suitable treatment for the morbid uterine conditions present, and in addition in some, by forcible dilatation of the vaginal orifice and the use of Sims' vaginal rests. He concluded by saying that "while a minor degree of vaginismus is very common and passes away under the manipulations necessary for the treatment of the associated condition of the uterus, the more severe form of the disease, causing special symptoms and requiring particular treatment, is not common. This condition appears to me to be essentially of reflex origin. In none of the cases that have come under my observation was there any local cause, such as inflamed follicles or sensitive papillæ. With regard to treatment, my experience goes to show that a cutting operation is not necessary; nor does it appear that this adds much, if anything, to the curative effect of the subsequent dilatation. In the fourth case Dr. Sims himself had performed this operation, and when I first examined the patient the greatest difficulty arose from the state of vaginismus, and I had to desist and resume it under chloroform. In the fifth case the same effect had been produced by a laceration of the perineum in the patient's only confinement. In these it was very evident that the vaginismus kept pace with the amount of uterine derangement."

The President, Mr. Lawson Tait, expressed deep regret that Dr. Marion Sims had ever coined the word vaginismus to explain a condition which he (Mr. Tait) did not for a moment believe existed. His (the President's) difficulty was that some time after Dr. Marion Sims' original papers appeared he (Mr. Tait) undertook a series of dissections in order to see this wonderful muscle to which such great powers were attributed, and out of eleven dissections he only found in one case traces of a few pale irregularly-formed bundles of fibres to represent what in the text-books of anatomy was represented as a powerful structure. He did not believe in strong spasmodic contraction of this muscle, and scouted the theory of vaginismus completely. To say that the few pale fibres which represent a sphincter vaginal muscle, such as he saw, could resist the entrance of the male organ was an absurdity. The muscles which prevented entrance he believed to be the adductors and glutei.—(*Brit. Gyn. Jour.*, Feb. '87.)

Cœsarian Section: a Remarkable Case.—In the recently-published second volume of Tarnier and Budin's *Traite de l'Art des Accouchements* appears the report of a case which illustrates the important problem of how long the fœtus in utero may survive the mother's death. During the Commune of Paris the Fédérés fired several shots in the direction of the Maternité. A superintendent going round found a woman nearly at term dead in her bed. A ball had fractured the base of the skull, entering the brain. Tarnier, who was in the hospital, went up to the ward and prepared to perform the Cæsarian section, but the Fédérés, seeing the lights in the ward, fired into it, so that to avoid giving them a target the lights were put out, and the corpse was taken down to an amphitheatre sheltered from the balls. Here the operation was carried out, and Tarnier extracted a living child, which, unfortunately, sank some days later. What time elapsed between the mother's death and the operation? Perhaps three-quarters of an hour, perhaps an hour, or more. At any rate, it is certain that at least twenty minutes passed from the moment when the superintendent found the woman dead and that the child was extracted.

Forcible Tearing-out of the Uterus and Complete Destruction of the Recto-vaginal Septum.—The following case is of rare interest medico-legally, and as an illustration of how tolerant at times the female pelvic organs are to the most violent injury. A woman of 40 had been drinking with two male companions, who afterwards had intercourse with her consent. She felt great pain in the pelvis and became unconscious. It was fourteen hours later before she was seen by a medical man and the following conditions noted: She looked stupid, her clothes covered with mud and blood, and in some respects looked like a woman who had been recently delivered; the pulse feeble and compressible, but not alarmingly bad; sensorium clear, no fever, and no pain except a burning sensation in the lower part of the abdomen. On examination, a fleshy mass covered with mud and blood, at first sight suggesting an expelled placenta, protruded from the vagina. This, when cleansed, was discovered to be the uterus torn from its attachments, lying outside the vaginal entrance, so that the os looked to the anterior vaginal wall and the fundus to the ground. The whole recto-vaginal septum was torn through and the uterus retained only by the remaining part of the anterior vaginal wall and the left ligaments. At the lateral angles of the uterus, parts of the round ligaments, the tubes, and the broad ligaments were visible. The ovaries were not in sight, and the bladder and urethra were uninjured. No bleeding. The bladder was allowed to remain full to prevent any further prolapse of abdominal contents. Treatment as follows: The uterus was severed from its remaining attachments, elastic ligatures being employed. The lacerated fragments of vagina and septum were trimmed off, the cloaca washed out with 1–5000 corrosive sublimate, and plugged with iodoform gauze. The woman recovered, and when examined on the twenty-first day the conditions were as follows: A deep cloaca was present, whose anterior and lateral walls were vaginal, the posterior being rectal mucous membrane. Bridges of granulation tissue lay between. A couple of plastic operations restored the recto-vaginal septum and sphincter ani. It would appear that the perpetrator of the injury had passed his hand into the rectum, seized the uterus and forcibly dragged it out, the recto-vaginal septum being necessarily torn. The full bladder, fainting of the woman, and old uterine adhesions seem to have rendered survival possible. The case is reported by Schmallfuss (*Centralblatt für Gynäkologie*, No. 46, 1886).

In my last Retrospect in the February number of this JOURNAL I dwelt upon recent developments of abdominal surgery in the treatment of puerperal conditions. It will be remembered how intensely interesting and satisfactory in results were the cases published by Mr. Lawson Tait and Dr. J. W. Taylor of Birmingham. Still more remarkable is the case recently reported by Prof. Schultze of Jena (*Deutsche Med. Woch.*, Nov. 4, 1886), in which for severe puerperal symptoms he amputated the septic corpus uteri of a bicornuate uterus. The patient, aged 21, had a child born dead in the seventh month of pregnancy. The placenta was retained, and the midwife in her attempts to remove it tore away the cord. Some time afterwards the practitioner who was summoned found the cervix of the double uterus so narrow that he could not reach the placenta. Expression was unavailing. She was taken to hospital, but all the measures adopted, including hot baths, constant current, anæsthesia, etc., produced no effect on the cervical canal, which barely admitted the finger. On the third day after delivery the temperature rose to 39.9°C, and there were rigors, with putrid discharge. Another attempt, under anæsthesia, was made on the next day to remove the placenta. A stricture in the right horn admitting the finger was found. The left horn was empty. In the right the placenta lay adherent, and a small stinking piece removed. On the eleventh the temperature was 40.1°C., and there were rigors and peritoneal disturbance. Schultze had before him three courses, viz., to do a conservative Cæsarian section, removing the placenta only, or, if necessary, to remove the horn with the placenta. Most probably he considered the amputation of both horns would be required. The incision from navel to symphysis was made in the middle line, the uterus turned out with the hand, an elastic ligature applied, the uterus incised, and the stinking placenta removed. The uterine wall was found to be rotten, the putridity extending to 2 mm. below the peritoneal reflexion. As the left horn was also discolored, amputation of both horns was imperative. There was an exudation in the pelvis. The infundibulo-pelvic ligaments (of the ovary) were found so short that a pure Porro's operation could not be carried out. These ligaments, therefore, were tied and divided, the uterus and ovaries brought out, and any part of the broad ligament gaping between the elastic tube and the ligatures stitched with a running catgut suture. It was evidently impossible to treat the pedicle by Schröder's method for fibroids, as pus could be squeezed out of the lymphatics of the stump; it was therefore fastened in the abdominal incision according to Hegar's method, the peritoneum stitched to it below the elastic tube, the surface of the stump seared, and afterwards chloride of zinc applied. The temperature soon fell, and on the ninth day the seared portion of the stump was removed with scissors. Schultze finally lays down the following indications for such interference, viz., the mischief must be in the uterus, and the possibility of septic thrombosis and embolism elsewhere must be excluded.

The frequency of Pathological Conditions of the Fallopian Tubes formed the subject of a paper before the last meeting of the

Obstetrical Society of London by Dr. Arthur H. N. Lewers, and was the outcome of observations on the pelvic organs in a series of a hundred cases in the post-mortem room of the London Hospital, made with the view of assisting in the determination of the frequency with which dilatation of the Fallopian tubes—hydrosalpinx, pyosalpinx and hæmatosalpinx—occurs among the general population. Recently Dr. Henry Coe, in his paper " Is Disease of the Uterine Appendages as Frequent as it has been represented to be ?" (*Amer. Jour. of Obstetrics*, June, 1886) said : " Actual disease of the tubes is far less frequent than is generally believed." Others, on the contrary, believed these conditions to be of frequent occurrence. Cases where the contents of the dilated tubes were not distinctly purulent, or were not composed of blood, were classed by Dr. Lewers as hydrosalpinx. Disease of the Fallopian tubes, restricting the expression to pyosalpinx, hæmatosalpinx and hydrosalpinx, was met with in seventeen cases out of one hundred examined. A detailed description of each specimen was given in the paper, which included also a table classifying the chief points of interest in these seventeen cases.

Dr. Galabin thought this communication was of very great value as an addition to the evidence on the subject by Dr. Kingston Fowler. He wished to ask whether the one hundred cases recorded were consequential or selected, as he thought that 17 per cent. was a large proportion of cases of distension of the Fallopian tubes. In 302 necropsies of women above the age of puberty at Guy's Hospital the pathologists had only found twelve cases of distension of tubes, and two of these were very trivial. This was a proportion of only four per cent. There was only one case of pyosalpinx and a doubtful case, the pathologist being uncertain whether two suppurating sacs were tubes or ovaries, as the ovaries could not be found. There were fourteen cases of chronic inflammatory disease about the Fallopian tubes without distension. Of the whole twenty-six cases it was probable that in seven pelvic inflammation was indirectly the cause of death through the medium of general peritonitis, intestinal obstruction, or in other ways. These included the two cases of pyosalpinx, one of hydrosalpinx, and four of chronic inflammation without distension. Thus in 302 cases, there were of chronic inflammatory disease nine per cent., distension of tubes four per cent., and death indirectly in about two or three per cent.

Mr. Lawson Tait spoke in eulogy of Dr. Lewers' paper. He found conclusions drawn from the post-mortem room as regards causation, progress, prognosis and treatment identical with those which he had been preaching for about ten years on the basis of clinical experience. He confessed that it was somewhat a staggering thing to find 17 per cent. of the women who died in the London Hospital suffering from tubal disease, and this did not include those cases which suffered the most, in which there were adhesions between the ovaries and tubes to the surrounding viscera, more particularly the peritoneal layer lining Douglas's pouch, resulting ultimately in complete retroversion of the uterus with its appendages, and forming one of the most dreadful conditions which the gynæcologist had to deal with. When removed it was difficult for an unskilled pathologist to see anything the matter with them. Dr. Lewers had not included such cases, and they must have been numerous. He thought the explanation of the higher percentage at the London Hospital and the small group at Guy's must be due to locality, and that gonorrhœa was more common amongst the poor at the east end than on the south side of the river. At the out-patient department at Birmingham, ten per cent. of the women who applied for relief suffered from chronic inflammatory disease of the uterine appendages. All these did not require operation. The most staggering conclusion to be derived from Dr. Lewers' paper was the enormous fatality of these diseases. At the London Hospital the death-rate was 24 per cent., while at Guy's it would appear to be 25 per cent. For years Mr. Tait had been arguing in favor of operation in order to relieve suffering, but when the pathologists at the London, Guy's and Middlesex Hospitals showed a death-rate between 24 and 50 per cent., the cry for relief by operation was one that could not be gainsaid. His own results showed that these cases could be relieved by operation, with a mortality not exceeding two or three per cent. The question as to the sterility caused by these diseases might be settled by ascertaining the period between the occurrence of death and the birth of the child. Mr. Tait agreed with Dr. Lewers that hydrosalpinx seems to precede pyosalpinx.

Dr. Horrocks was surprised at the large percentage of disease of the Fallopian tubes shown in Dr. Lewers' table of cases. He found that in many cases the disease began in the ovary and glued the fimbriated extremity to itself, which led to pathological changes in the tubes. In some cases the affection spread from the vagina to the uterus and from the latter to the tubes. In all his cases there was peritonitis, but in nearly every instance it was a chronic and effete process indicated only by old fibrous bands of adhesions.

Mr. Alban Doran noted that it was remarkable to find some forms of tubal disease so frequent. It must be assumed that milder forms were more common. Catarrh of the tube must involve discharge, which probably escaped through the uterus so as not to produce symptoms. It was not likely that it escaped through the ostium into the peritoneal cavity, else hydroperitoneum would be more frequent, as he had pointed out in his paper on papilloma of the tubes. The severe forms of tubal disease with local peritonitis showed how the tubes were a highway from the exterior into the peritoneum. Their frequency amongst the east-end women suggested that they arose from extension of neglected leucorrhœa and gonorrhœa rather than from sounding or syringing. Disease of the tubal mucous membrane was more probably caused by the passage of fluids upwards than by extension of inflammation. Extension might occur, but mucous inflammations were generally localized in the genital as in the respiratory tract.

Dr. Imlach regarded Dr. Lewers' paper as important, and trusted the investigation would be continued, and that pathologists would scrutinize the ovaries and tubes as carefully as they did other organs. The gonorrhœal origin of these diseases was often assumed. He had examined a large number of women in the Lock Hospitals, but had not found a single example of pyosalpinx amongst them. The question of etiology was important, and could only be settled by clinical investigation and a large series of gonorrhœal patients.

Dr. Matthews Duncan expressed his sense of the great value of Dr. Lewers' paper, but felt the want of further information regarding the cases. He wished for information as to the symptoms, if any, caused by the pathological conditions. It was probable that these pathological conditions were obselete, and evidence only of long past disease. This view was confirmed by the ages of the patients. Mr. Tait had said that in his practice the average was 27 to 30, and Dr. Lewers' cases were above 40 on an average and many quite old. Dr. Matthews Duncan was not astonished at there being evidence of disease in 17 per cent. of post-mortems, for he had long known that evidence of past or present disease in the region of the uterine appendages was a very frequent occurrence.

Dr. William Duncan thought it most important that of the seventeen cases reported fourteen were over 40 years of age, and in only one case were definite symptoms of pelvic mischief given, while almost all died from diseases not attributed to tubal mischief, showing the fallacy of the view that most cases require laparotomy.

Dr. Lewers, in reply, stated that the cases were as nearly as possible consecutive, and that the inquiry lasted thirteen months. There were many cases showing more or less extensive old adhesions not included in this list. He did not think gonorrhœa was more common in the east-end than elsewhere in London, and many of the cases at the London Hospital came from the adjoining districts. He thought hydrosalpinx and pyosalpinx were stages of the same disease, and the cases in his table confirmed this to a great extent. If further investigation should establish this view, and that pyosalpinx has a mortality of 40 per cent., we shall not be able to resist the conclusion that dilated tubes should be removed. None of the seventeen cases of dilated tubes came from the obstetric wards, though some of the one hundred cases examined came from those wards.—*Lancet*, May 14, 1887.

QUARTERLY RETROSPECT OF SURGERY.

By Francis J. Shepherd, M.D., C.M., M.R.C.S., Eng.
Surgeon to the Montreal General Hospital; Professor of Anatomy and Lecturer on Operative Surgery, McGill University.

Surgery of the Brain.—A short account was given in the Retrospect for December, 1886, of Mr. Victor Horsley's admirable paper on *The Surgery of the Brain*, read before the last meeting of the British Medical Association. A glimpse of what has been done since Mr. Horsley read his paper will not prove unprofitable. The advance in this department of surgery has been rapid. Mr. Victor Horsley has operated in ten cases, with one death from shock. Dr. MacEwen of Glasgow has had three succeessful cases, and many others have had one each. In many of the successful cases the prognosis without operation was inevitably fatal. There are yet great difficulties in diagnosis of brain cases, and the surgeon not only looks to clinical medicine for further light on the subject, but experimental physiology, as, notwithstanding the vituperation so abundantly showered on vivisectionists, the functions of different parts of the brain have been determined chiefly by experiments on animals.

Cerebral Abscess in connection with Disease of the Ear.—The connection between mastoid disease and cerebral abscess has long been recognized, but only very lately have attempts been made to treat such cases surgically. So far very few successful cases are recorded. In addition to the ones quoted below from English literature, Truckenbrod (*Zeitschr. f. Ohrenheilk.* XV, 1886) reported a case of abscess from mastoid disease operated on by Schede of Hamburg. In this case a discharging sinus was enlarged, the dura mater exposed and punctured, and an abscess the size of a small orange evacuated. Ogston in 1876 (*Brit. Med. Journal*, Dec. 2, 1876) trephined for cerebral abscess consequent on otitis media and evacuated nine ounces of pus between the skull and membranes. Perfect recovery ensued. Here the brain was not opened. Schondorff's case was not one of true trephining (*Archiv Klin. Chir.*, Bd. XXXI, 1885). A fistula which followed acute purulent inflammation of the middle ear was enlarged, pus evacuated, and the opening afterwards drained. No incision into the abscess was made.

The operations reported by English surgeons are much more brilliant than any of the foregoing. The diagnostic accuracy displayed in two of the cases and the masterly manner in which the operations were planned is worthy of imitation. In the *British Medical Journal* for December 11th, 1886, Dr. W. R. Gowers and Mr. Arthur E. Barker report a successful case of "*Abscess of the temporo-sphenoidal lobe treated by trephining.*" The patient, a young man aged 19, had scarlet fever in 1875, since which time the right ear had discharged a thin, yellow fluid, small in quantity and offensive. The last two days of August (1886) he began to feel unwell, and had severe pain in and around affected ear. Sept. 11th he took to his bed, with a temperature of 105°F. Next day the temperature was 103°, and the following evening 99.4°. No history of constipation or diarrhœa. On admission into hospital (Sept. 15th), a careful examination revealed no impairment of any function of the cerebral nervous system. There was, however, slight double optic neuritis. A blister was applied behind the right ear and calomel was given. The temperature ranged from 96.2° to 101.8°. On the 20th, Mr. Barker found a large perforation of right membrana tympani, and through this cleansed the middle ear; there was no swelling in the mastoid or temporal regions, and only a little tenderness. The optic neuritis increased on Sept. 25th. The patient became dull and had a severe attack of vomiting without previous nausea; no headache or squint. On the 28th Mr. Barker opened the mastoid antrum with a gouge in the usual way, half an inch above and behind the auditory meatus. There was no gush of pus, but some came away on the instrument, but on injecting it, pus welled out of the meatus. After thoroughly cleansing the middle ear a drainage-tube was left in the opening and the parts dusted with iodoform and dressed with salicylated wool. The patient improved up to the 2nd of October, when he became drowsy and again vomited. Next day he was delirious. On the 5th the patient had a severe rigor preceded by a temperature of 105°. Dr. Gowers, considering that the rigor and the intense optic neuritis, taken in conjunction with the almost negative result of the previous exploration, constituted evidence of the existence of a cerebral abscess, asked Mr. Barker to trephine and search for one in the temporo-sphenoidal lobe. This was done the same evening. A V-shaped flap with the base upwards exposed a point one and a quarter inches behind and one and a quarter inches above the centre of the meatus of the ear. At this point the pin of the trephine was inserted and the bone removed. This corresponded to the inferior posterior angle of the parietal bone, close to the squamosal suture. The dura mater was found quite healthy and divided with a knife and turned back, when the surface of the brain was seen unaffected, and there was no fluid in the arachnoid space ; a large aspirator needle was now thrust into the temporo-sphenoidal lobe in a direction inwards, forwards and downwards, and when the point had penetrated half an inch fœtid pus began to pour out (about $4\frac{1}{2}$ drachms). When no more pus flowed, a Sims' forceps was slipped in and the opening dilated, and two or three drachms more pus was evacuated. To provide for thorough drainage of the cavity, the cortex was scraped away with a small Volkmann's spoon to the extent of the opening in the dura mater. The wound was washed out and dusted with iodoform, and the V-shaped flap cut away at the base to leave the trephine hole uncovered, a rubber tube placed in the abscess cavity, and the whole dressed with carbolized gauze. Next day the rubber tube was replaced by a silver one, which kept better in place. The case progressed most favorably, and on November 12th, thirty-eight days after operation, patient left for the Convalescent Home with the trephine wound quite healed.

In his remarks on the case, Mr. Barker said that in connection with these ear cases where abscess resulted, it was more frequently found in the temporo-sphenoidal lobe than in the cerebellum or elsewhere, because the roof of the tympanum is usually the thinnest part of its walls, but not feeling sure in this case he exposed the mastoid foramen, which was perfectly healthy ; if the abscess had been in the cerebellum pus would have escaped by the mastoid foramen, because if there be inflammation in the posterior aspect of petrous bone it can hardly reach the cerebellum without forming a layer of pus under the dura mater of the lateral sinus.

Dr. W. S. Greenfield (*Brit. Med. Journal*, Feb. 12, 1887) also reports a case of *Cerebral Abscess with Otitis* successfully treated by trephining. The patient was a man aged 26, who was brought to the Edinburgh Royal Infirmary December 31st in a semi-comatose condition. After a severe cold in the head he began to suffer from severe headache, and became heavy and dull. He soon began to vomit his food, and his bowels were constipated. The week before admission the vomiting and headache became much worse. There was no delirium. Had scarlet fever when a child. There was no paralysis of face, nor was there any strabismus. The left eye showed on examination the papilla much swollen, clouded and gray. There was no discharge from the ears. On January 5th there was distinct ptosis of left eyelid, and left pupil dilated ; the torpor continued. The tongue deviated to the right, and there was intense optic neuritis in left eye, but none in right. On the 6th, the ptosis was complete, with dilation of pupil and some paralysis of fourth and sixth nerves as well. The left ear now for the first time began to discharge a dirty-brownish fluid, and on examination a perforation of membrana tympani was found. Temperature subnormal. Dr. Greenfield thought that the symptoms pointed in the direction of abscess in the anterior part of the left temporo-sphenoidal lobe. Operation was now decided on, and on Jan. 8th Mr. Francis Caird made a vertical incision some two inches in length in the temporal region, and the pin of the trephine was applied one inch and a quarter behind the left external angular process, and nearly one inch above the zygoma. The disc of bone removed consisted entirely of the temporal on its outer and lower aspect, and on its inner aspect of temporal, parietal and a small spur of sphenoidal. The exposed dura mater bulged forwards and felt tense, but did not pulsate ; on cutting through the dura mater a Graefe's knife was passed for at least half an inch directly inwards, when fœtid pus welled up (two ounces.) A drainage-tube was introduced and antiseptic dressing applied. Patient had a restless night, and still tended to lie on his right side and bury his face in his pillow. Next day he was very much better, ptosis was almost gone, was much more intelligent, and answered questions intelligently ; he now lay on his left side. From this time improvement continued, and he was able to sit up by the 30th. Patient had no mental symptoms after operation. He remembered everything up to three or four days before the new year, after which all was a blank. Patient on Feb. 7th was in good health, though he still had a slight purulent discharge from the left ear.

In his remarks on the case, Dr. Greenfield says that the commonest position for abscess secondary to otitis is in the middle lobe of the cerebrum, and that it frequently lies in close proximity to the roof of the tympanum. But there are frequent departures from this rule, and, moreover, the size and direction of the abscess are very variable. In his case the most definite signs of involvement of nerves suggested the probable extension of inflammation to the inner aspect of the front of the temporo-sphenoidal lobe. As regards the operation, he thinks from the size of the abscess and its communication with the tympanum there is little doubt it might have been reached much further back.

Dr. MacEwen of Glasgow reports (*Lancet*, March 26, 1887) a successful case of trephining for *Cerebral Abscess due to Otitis Media*. The patient, a boy aged 9 years, was admitted into the Hospital for Diseases of the Ear, under the care of Dr. Barr, January 13th, 1887, suffering from septic purulent otitis media and abscess of the brain. A month before admission he complained of severe pain in the region of right ear, which kept him from sleeping. Next day he vomited, after which he became drowsy. The severe pain, drowsiness, feverishness, with occasional vomiting, characterized the first seven days of his illness. On the eighth day he had a rigor lasting a quarter of an hour, and during the next two weeks he had as many as six rigors. He was admitted into hospital on the nineteenth day of his illness. He was then greatly emaciated, had a cough, temperature 100.8°, pulse 108, very drowsy, and complained of pain in right ear, from which there was a very offensive discharge, and there was a perforation of the upper part of the tympanic membranes. The symptoms still continuing two days after entrance, Dr. Barr perforated the mastoid process, opened the mastoid cells, and washed out the middle ear thoroughly. A drainage-tube was then inserted. Two days later the boy had a rigor, and on the twenty-ninth day of his illness there was a copious discharge of fœtid pus from the ear. Dr. MacEwen was asked to see the patient on the thirtieth day of his illness; he was then quite stupid, lying on his right side; had drooping of right eyelid, pain on percussion over right temporal region, but no œdema of mastoid process; pulse slow (50–60) and feeble; had cough and purulent expectoration; bowels constipated. There was a constant flow of excessively fœtid fluid from the external ear, greater in amount than would likely come from the antrum; so it was thought that there was a connection with the intra-cranial cavity. Cerebral abscess was diagnosed, situated in temporo-sphenoidal lobe. After washing the scalp well, a half-inch disc of bone was removed from the squamous portion of the temporal bone, one and a half inches above and half an inch behind the centre of the external auditory meatus. The dura mater was slightly congested; when it was opened the brain tissue immediately bulged. A hollow needle was inserted for some three-quarters of an inch, when foul gas escaped, and on pushing the needle a little further offensive pus flowed out. The opening was enlarged, when more pus escaped. The cavity was washed with a saturated solution of boracic acid. As there was still some oozing of pus, an aperture was drilled into the base of the skull just above the osseous boundary of the external auditory meatus, involving the squamo-petrosal suture. The dura mater was found intact; it was penetrated and the abscess cavity reached. A stream of boracic solution was passed from this aperture so as to wash out the cavity of the abscess, and was continued till it freely passed out of the upper opening; bone drains were employed and parts dusted with boracic acid, and sublimated wood-wool pads placed over all. The patient was extremely exhausted, but rallied in a few hours. After the first week he improved rapidly. The wounds were dressed once a week, when the parts were thoroughly syringed. Tubes removed in five weeks, and at end of six weeks child was quite plump. On March 17th still a slight purulent discharge from the ear, but hearing was good.

At the meeting of the Medical Society of London, held Feb. 21st, 1887, Mr. J. Black reported a case of trephining for supposed abscess of the temporo-sphenoidal lobes. The patient was a man aged 22, whose illness began with vomiting and shivering, and continued with rigors and high fever. He had suffered from otorrhœa for many years. There was a perforation of the membrana tympani, and there had been a sinus leading to mastoid cells. The cells were perforated and a free drainage established without much relief. A few days later trephining was performed, the dura mater was laid open, and brain pierced, without result. There was no optic neuritis. The patient, under stimulants and quinine in large doses, ultimately recovered. Mr. Brown inquired whether operation under the circumstances was justifiable.

In this connection there was an interesting discussion at the Medico-Chirurgical Society of Edinburgh in March last (*Lancet*, March 12th, and *British Medical Journal*, March 19th) on the *Diagnosis and Treatment of Cerebral Abscess*. Dr. McBride and Mr. A. G. Miller had a joint paper on cases of abscess following mastoid disease. In the paper Dr. McBride stated that if the vibrations be perceived by the injured ear in contact of the tuning fork with the cranial bones it indicates that the internal ear is intact, that the middle ear is the part affected, and that the abscess is situated above the tentorium. Should the vibrations not be perceptible, the internal ear is affected, in which case the matter is usually below the tentorium on the cerebellum. The operation proposed by Dr. McBride, and carried out by Mr. Miller, is to cut down as near as possible to the source from which the pus has sprung—*i.e*, by the nearest route to expose the roof of the tympanum. This is done by reflecting the pinna forwards, opening the skull by means of a chisel at a point a quarter of an inch above the osseous meatus. This opens the cranium exactly at the floor of the middle fossa. The dura mater is then raised from the petrous portion for the third of an inch towards the middle line, and the roof of the tympanum thus exposed, any abscess in connection with it being opened, or if contiguous, but not continuous, the abscess may be evacuated by incising the dura mater and a portion of the brain substance. Two cases operated on in this manner were reported. In each case the cerebral abscess was relieved by the operation, but both patients succumbed to septicæmia. In making a diagnosis between purulent meningitis and brain abscess the temperature was most important. Mr. Miller also drew attention to the relation which frequently existed between sudden cessation of the otorrhœic discharge and the supervention of formidable head symptoms. This appeared an important indication for treatment.

[Readers interested in this subject of mastoid disease and cerebral abscess might consult with profit the two following papers: "Abscess of the Brain resulting from Disease of the Ear," by Dr. Thos. Barr—*Brit. Med. Journal*, April 2, 1887. "On the Surgical treatment of Brain Suppuration following Ear Disease," by Dr. Robt. F. Weir—*New York Med. Record*, April 9th, 1887.]

Trephining for Epilepsy.—Dr. Hughes Bennett and Mr. Pearce Gould (*Brit. Med. Journal*, Jan. 1st, 1887) report a case of epilepsy of six years' duration completely cured by surgical operation. The case is as follows: W. A., aged 36, married; six years before, received a violent blow on right side of head. He was stunned at the time, was taken to hospital, and treated for a scalp wound. He regained consciousness after a few hours, and the wound healed perfectly in a few days. Six weeks later he was seized with a convulsive attack, in which he lost consciousness, and it was observed that the movements of the limbs were confined to the left side. He had a similar attack a fortnight later, and these have continued at irregular intervals ever since, averaging one a week. His general health continued good, but after most of his attacks he was seized with violent mania which rendered him dangerous, so much so that he was confined in an insane asylum for three years. In May, 1886, he was admitted into hospital under Dr. Bennett. He was a tall, delicate-looking man, with all organs and functions of body normal and intelligence unimpaired. Over the right parietal bone was a transverse cicatrix in the scalp. This was movable, and no abnormality could be detected in the bone beneath, and there was no tenderness to touch. No trace of paralysis or loss of sensation. Special senses normal. The exact site of centre of scar was $3\frac{1}{2}$ inches from the longitudinal fissure in a line drawn vertically $2\frac{3}{4}$ inches behind the external meatus of the ear. During the two months patient was under observation in hospital he had weekly epileptic attacks, most marked on left side, preceded by irritability of temper. These attacks lasted five to ten minutes, after which he was very violent for half an hour and then fell asleep, and awoke in a few hours with headache. Next day he was in his usual condition. Immediately prior to attack he saw a bright red light in front of his eyes. Dr. Bennett advised trephining over the seat of the original injury in the hope of finding a depressed fracture or some other local or removable injury to the underlying cortex cerebri. On July 8th Mr. A. Pearce Gould made a large trephine opening at the seat of the cicatrix. The portion of bone removed was perfectly normal, and so was the dura mater underneath ; a circular portion of this was excised, when the exposed cortex was seen to be apparently healthy. The brain was then explored in four different directions for about one inch in depth ; nothing abnormal was detected. The wound was then closed and the man recovered, and five months after had had no attack. The operation was performed with the usual antiseptic precautions, the scalp being well washed and rendered aseptic previous to the operation. The wound was united with gut sutures and a drainage-tube used. Morphine (as recommended by Mr. Horsley) was injected before the anæsthetic was administered. The strange part of this case is that nothing apparently abnormal was found in the brain or its coverings, and yet the patient was relieved by the operation. His convalescence was uninterrupted and the wound healed soundly, there being not the least tendency to hernia cerebri.

Mr. Mayo Robson (*Lancet*), March 5th, 1887) reports a case of *Trephining over the Left Brachial Centre for Paralysis of the Right Arm.* The patient, aged 38, was admitted into the Leeds Infirmary, August 9th. Six days previously he was struck from behind over the head by a buck-horn handled stick. He was unconscious for ten hours after, and on recovering consciousness vomited. As soon as he regained his senses he noticed that he had lost the use of his right hand. He was dizzy and confused, and had loss of memory for some days. On admission to hospital there was a small lacerated wound on the left side of the skull, one and a half inches from the middle line, and a little in front of the mid-point between external occipital protuberance and root of nose. Bare bone could be felt on probing the wound, and at the posterior part was a depression in the bone. The whole of the right fore-arm and hand were markedly paralyzed. Sensation impaired and rhythmic twitching of the fingers. He was perfectly conscious and answered questions rapidly. Knee reflexes exaggerated on right side and some weakness of facial nerves. Well-marked œdema of left optic disc. Operation was decided on, and the depressed bone was trephined through a crucial incision. The inner table of the skull was found splintered, one piece especially depressing the membranes considerably. The fragments were carefully picked out and the dura mater exposed; it bulged slightly and was markedly pulsating; as it seemed perfectly healthy, it was not perforated. The operation, which was done under the strictest antiseptic precautions, only took twenty-five minutes. The case progressed most favorably, and was discharged cured on the 11th of September, both hands and arms being equally strong.

Dr. Robert Weir of New York reports a case (*Medical News*, March 5th, 1887) of an unsuccessful attempt at *Removal of a Sarcomatous Tumor from the Brain.* Mary R., aged 26, admitted to hospital September 16th, 1886, with following history: Has had four operations for sarcoma of the neck, the first two years ago and the last six months ago. Has latterly suffered intensely from headache on right side, clonic spasms of left leg, and cramped feeling of left hand. Left patellar reflex exaggerated. Slight left optic neuritis. The case was supposed to be one of tumor of the upper limit of the fissure of Rolando. Skull trephined in the line of the fissure of Rolando, one and a half inches from median line. Dura mater tense and bulging; opened by a crucial incision and brain explored, but nothing found. Wound healed well, but patient died two and a half months after the operation. At the autopsy a tumor was found springing from the left lobe of the under surface of the cerebellum, which proved to be a spindle-celled sarcoma.

In the *Philadelphia Medical News* for April 16th, 1887, Drs. Birdsall and Robert Weir report a remarkable case of *Removal of a large Sarcoma from the Brain.* The tumor was situated in the right occipital lobe of the brain, and was of large size. The patient was a Polish Jew, aged 42. He first observed that his gait was unsteady in August, 1885, and he had a severe attack of vomiting after a sea bath. Soon after diplopia for distance and increased awkwardness in walking were observed, and about the same time a disagreeable sensation akin to numbness in right leg, hand and shoulders. This and the diplopia were transitory. Headache, usually frontal, was present occasionally, but never severe. In October, 1885, patient consulted Dr. Seguin, who found that in addition to other symptoms he had left lateral hemianopia. The diagnosis of tumor of mesial aspect of right occipital lobe was made. Patient was treated with large doses of iodide of potassium without effect. In October, 1886, he was seen by Dr. Birdsall, who found left lateral hemianopia and double optic neuritis. Smell, taste and hearing normal. No word deafness. No paresis. The diagnosis of tumor of occipital lobe involving cuneus was made, and operation was advised. This was performed by Dr. Weir on March 9th, 1887. The skull was exposed by a U-shaped flap three inches long and three wide, with base upwards so as to cross irregularly the median line, the greater part being over the posterior cerebral lobe. A trephine one inch in diameter was used, and two buttons of bone taken away, one above the other, and the intervening bridge cut away with forceps. The dura mater rose tensely into the space, and when it was cut through the tumor immediately presented itself. With considerable difficulty and some hemorrhage it was enucleated and removed, but not before it was divided. There was a greal deal of hemorrhage into the large cavity left after removal of the growth, which was temporarily stopped by sponge pressure. The tumor weighed 5¼ ounces, measured 3¾ by 2¾ inches, and was 2½ inches thick. Owing to the hemorrhage the cavity was stuffed with iodoform gauze, and in consequence the wound could not be properly closed. The patient was very weak after the operation, and was kept warm and had enemata of whiskey and milk every two hours. In the evening his pulse became weaker and the oozing still continued. Patient was conscious, though dull. Transfusion was decided on, so nearly two quarts of a saline solution was injected into the basilic vein of right arm, with immediate improvement of pulse and consciousness. The dressings were removed and the flaps of scalp separated, with the intention of removing the gauze, but patient rapidly collapsed and the bleeding still continuing, more gauze was packed in and the flaps replaced. Stupor rapidly set in, and notwithstanding a second transfusion, patient died at two a.m.

Mr. Horsley (*Brit. Med. Journal*, April 23rd, 1887) reports ten cases of operations on the brain and cranial cavity, and gives a detailed account of the methods employed. See, also, Mr. Horsley's paper in *Retrospect* for December, 1886.

Mr. Bennett May (*Lancet*, April 10th, 1887) reports a case of *Excision of Tumor of Cerebellum* in a boy aged seven. Child sank a few hours after operation.

Immediate Treatment of Compound Fracture of the Skull.—Dr. P. E. Muskett (*Australian Medical Gazette*, Oct. 15, '86) advocates early operative interference in compound fracture of the skull, and to support his views refers to a previous report of seven recoveries in thirteen cases under the care of the surgical staff of the Sydney Hospital during a period of fourteen months, and gives an analysis of twelve more successful cases of compound depressed fracture of the skull treated by operation. With regard to the indications and objects of such treatment, Dr. Muskett seems to hold veiws similar to those that have been lately expressed by Dr. Wagner of Königshutter, who is of opinion that the trephine should be used, not so much for relieving or preventing compression, as for guarding the patient against septic inflammation. Dr. Muskett gives the following as the after-results to be feared in compound fracture of the skull if the depressed fragments are not elevated or removed and perfect drainage insured. (1) Septic meningitis setting in on the second or third day after the injury. (2) A spreading encephalitis running on to suppuration, with extensive destruction of cerebral tissue. (3) If the dangers of acute inflammation have passed off, death may result from softening around the injured part. (4) Subacute encephalitis, which may follow at a remote period. (5) The irritation of splinters from the inner table may eventually cause chronic meningitis, terminating in suppuration. (6) The same condition may induce chronic epilepsy. Dr. Muskett says that the removal of depressed fragments is essentially a procedure for preventing the development of inflammation in the membranes of the brain. In answer to the objection of trephining being a grave operation, Dr. Muskett holds that the application of a trephine, or what is more preferable, of Hey's saw, is not dangerous in comparison with the risk incurred in leaving osseous splinters imbedded in the dura mater.—(*London Medical Record*, January, 1887.)

The Cure of Cold Abscesses by Iodoform Injections.—This method of treatment has been of late years largely adopted on the continent of Europe. It consists in the evacuation of the abscess by means of an aspirator (the largest sized needle being used) and in the subsequent injection of a solution of iodoform in ether ; a four or five per cent. solution is the one commonly used for abscesses of large or moderate size, but occasionally the strength is increased to ten per cent. when the abscess is of small dimensions. The quantity of solution to be injected varies according to the circumstances of the case, and it is generally recommended that not more than a drachm of iodoform should be used. The ether holding the iodoform in solution finds its way into every pocket and sinuosity of the abscess cavity and there deposits a film of iodoform. After the injection has been made some little attention is necessary, for as the ether is rapidly volatilized by the heat of the body, and may cause an unpleasant distension of the abscess cavity, it may sometimes be necessary to introduce the needle of a hypodermic syringe in order to give exit to the gas. As a rule, patients suffer little from the operation, and are able to go about as usual after it. One injection is often sufficient to effect a definite cure of the abscess, provided it be not connected with joint or bone disease. Sometimes it is necessary to repeat the operation several times. The pain caused by the injection is usually pretty severe, and patients sometimes decline to undergo a second operation. Iodoform injections have also been employed with benefit in tubercular bone and joint disease.—(*Medical Record*, March 12th, 1887.)

Fixation of Displaced Semilunar Cartilages.—Prof. Annandale (*Brit. Med. Journal*, Feb. 12th, 1887) describes this operation and narrates four cases successfully treated by himself. The operation is performed by making an incision on the affected side along the upper edge of the tibia from the ligamentum patellæ for some three inches. After securing all the bleeding points the synovial membrane is also incised. The displaced cartilage is put in proper position with a blunt hook, and is secured to the periosteum and fascia over the head of the tibia by several catgut sutures. The external wound is then closed and antiseptic dressings and splint applied.

Intra-peritoneal Rupture of the Bladder.—Sir Wm. MacCormac reports (*Lancet*, Dec. 11th, 1886) two cases of intra-peritoneal rupture of the bladder succesfully treated by abdominal section. In each case the rupture in the bladder was closed with silk sutures after Lembert's method, not including the mucous membrane, and so inverting it, after which the bladder was moderately distended to see if it was tight, and then the abdominal cavity was irrigated with a one per cent. solution of boric acid ; the peritoneum was not sponged out. The abdominal wound in the first case was drained with a glass drainage-tube. In one case the rent was four inches long, extending from the superior fundus to the recto-vesical cul-de-sac. In the other case the tear involved two inches of the upper and posterior part of the bladder.

Dr. John Homans (*N. Y. Med. Record*, Jan. 15th, 1887) writes that when he has accidentally wounded the bladder in performing ovariotomy, he has sewed up the rent with a continuous silk suture, care being taken not to include the mucous membrane in the stitch. A catheter was placed in the bladder for ten days, and the patients recovered without any vesical symptoms.

Dr. R. F. Weir (*N. Y. Med. Record* for Jan. 22nd, 1887) reports a case of crushing injury in which he was not sure whether the bladder was ruptured or not, and where he satisfactorily proved the absence of intra-peritoneal rupture by slowly distending the bladder with a weak solution of carbolic acid after having placed a Petersen's pad in the rectum. The line of dulness was noted before and after the injection of the fluid. The solution which had been thrown in was evacuated and measured, and was found to correspond to the quantity previously injected. This, of course, demonstrated the integrity of the bladder. In making this experiment Weir says that not more than seven or eight ounces of fluid is necessary. By making use of this simple method in doubtful cases a useless exploratory incision of the abdomen may be avoided.

Correspondence.

BERLIN, May 1st, 1887.

To the Editors of the CANADA MEDICAL & SURGICAL JOURNAL.

SIRS,—Having arrived in Berlin just in time for the sixteenth congress of the German Surgical Association, and being privileged to attend its meetings, I propose to give you a brief sketch of its work, in the hope that it may be of interest to your readers.

On Tuesday afternoon, April 12th, those of the members who had arrived in Berlin assembled at the Hotel du Nord, where an informal social meeting was held and some preliminary business transacted, the secretary being present with his books, programmes, etc. On the following morning (April 13th), the congress was formally opened by the President, Prof. von Volkmann, in the hall of the Royal University. There were between 250 and 300 members present, besides a number of visitors, and although some of the most noted German surgeons were conspicuous by their absence, the work was carried on with great spirit and lasted four days. After the President had read his address, a programme of over forty papers was entered upon and diligently followed to the end. A number of interesting cases were shown and many others reported in connection with the papers, and a most interesting feature of the congress was the regular morning visit to the hospitals at eight o'clock. One hospital was visited each morning (as per programme), and the visitors were conducted through the operating rooms and wards by the surgeon in charge and his assistants. At these visits patients were shown and dressings removed and reapplied; special instruments and appliances were exhibited, and special methods of operating discussed. The first of these demonstrations was by Prof. Küster, in the Queen Augusta Hospital, on Thursday morning. Unfortunately, through a misunderstanding, I was not present at this visit, but from what I have since seen of Prof. Küster and his hospital I am sure that this visit was not less instructive than the subsequent ones, and I regret very much my misfortune in being absent on that occasion. The nursing in the Queen Augusta Hospital is carried on by a Protestant sisterhood, which is recruited largely from the ranks of the nobility, and is a special feature of this hospital.

On Friday morning members and visitors were shown by Dr. Hahn through his wards in the Friedrickshain Hospital. Among the patients here shown were several cases of resected intestine, excision of the pylorus, resection of the knee joint, several osteotomies, a case of echinococcus of the liver (convalescent), and a patient from whose gall-bladder 204 biliary calculi had been removed; also a case of removal of the larynx and three cases of extirpation of the thyroid gland. Dr. Hahn is perhaps best known in connection with the operation for movable kidney by suturing the organ to the loin so that it may become adherent in its normal position. After the visit, Dr. Hahn also showed some stomachs which had been removed post-mortem at periods varying from three months to two years and a half after excision of the pylorus, and explained his method of operating.

On Saturday morning, Prof. Bardeleben conducted the visitors through his wards in the well-known Charité Hospital. Very interesting cases were also shown here, but the special features which I noticed were in connection with the extension appliances in use in the treatment of fractures of various kinds and in hip joint disease. In both the Friedrickshain and Charité Hospitals an apparatus introduced by Dr. Phelps of Chateauguay, N.Y., is very largely used in the children's cots, and seems to be highly appreciated by the surgeons of these hospitals. It consists of a frame, to which the child is strapped, and is so arranged that after operations about the pelvis or lower limbs the parts can be kept at perfect rest and the dressings kept clean and dry. In all of the hospitals mentioned, a favorite material for dressings is turf-moss cleansed and prepared with corrosive sublimate, and either made into pads by sewing up in gauze or used in compressed sheets resembling spongeopilin. Corrosive sublimate is the antiseptic most largely employed. Chloroform is used to the exclusion of all other anæsthetics.

The banquet was held in the Hotel du Nord on Thursday afternoon at four o'clock, but was not largely attended, about one hundred sitting down to it.

On Sunday a memorial service to the late Prof. Schröder was held in the University.

With the exception of the first meeting, the morning meetings of the congress were all held in the amphitheatre of Prof. von Bergmann's klinik, and the afternoon meetings in the University. On the whole, I think the meeting must be described as a very successful one, and was calculated to create a most favorable impression in the mind of the stranger with regard to German surgery and surgeons. Prof. von Bergmann was elected president for the ensuing year. J. B.

THE HEREDITY OF ACQUIRED PECULIARITIES.

To the Editors of the Canada Medical and Surgical Journal.

Sirs,—As tending to maintain the interest in a subject so important, I beg to call attention to the following cases in which peculiarities were inherited :—

Mons. de Quatrefages states that in a certain district the offspring of a five-toed cock have become so numerous that the common variety is no longer to be met with.

But of special interest to physicians are the following cases, reported by a very high authority :

Hereditary Transmission of Injuries to the Nervous System.—In the *Lancet* of January 2nd, 1875, Brown-Séquard illustrates the following examples of hereditary transmission: 1. Development of epilepsy in animals born of parents which had been made epileptic by section of part of the spinal cord, or of the sciatic nerve. 2. Change in the form of the ear of animals born of parents which had presented a like change after section of the great cervical sympathetic. 3. Partial closure of the pupil in the descendants of animals in which the pupils had become contracted after section of the cervical sympathetic or removal of the superior cervical ganglion. 4. Protrusion of the eyeball in the young of animals in which the eye had become prominent from lesion of the restiform bodies. 5. Congestion and gangrene of the ears of animals the parents of which had the same lesion following irritation of the restiform bodies near the point of the calamus scriptorius. 6. Absence of the claw from certain of the toes of the posterior extremity in animals the parents of which had the posterior extremity rendered insensible by section of the sciatic or crural nerves.

These experiments are of great importance as bearing on the question of hereditary transmission of peculiarities acquired even in one generation.

Yours truly,

T. WESLEY MILLS.

McGill College, Montreal, May 16th, 1887.

THE "STUPIDITY" OF STUDENTS: WHO ARE RESPONSIBLE?

To the Editors of THE CANADA MEDICAL & SURGICAL JOURNAL.

DEAR SIRS,—I am glad that one of your correspondents has expressed, in the May number, some views on examinations and kindred matters. This opens up a subject on which I have felt keenly for a great number of years. During this time I have in general found any number of people, especially teachers, ready to speak with the greatest freedom of the "stupidity" of students of all ages; the said students being regarded either with contempt or as the necessary product of the working of nature's laws—in a word, born stupids, for whom the organization of their ancestors, or something much vaguer in most instances, was responsible, and as a result considered as hopeless cases—

something to be deplored in nature and irremediable by any human means. With the exception of here and there a protesting voice, not a word is uttered on behalf of such unfortunates. Now I purpose to ask, and perhaps in some degree to answer, the question: Who are responsible for this so-called stupidity?

In order not to be misunderstood, let it be said distinctly at the outset that I admit that there are stupid people, born so, with such a defect in organization that education cannot, however perfect, remedy the condition wholly or even to any great extent; but I wish also, most emphatically, to assert my belief, as the result of very long-continued and close observation, that the number of such is quite small. Leaving out of the account the very few intellects gigantic by nature, the rest of mankind are, originally, probably very much on a par. The differences seen later in life are owing to a great complexity of causes, largely to what, in a word, constitutes *character* as distinguished from intellect. The conquest of the world is for the strong—but mostly for the strong in character rather in intellect merely. What I wish to show in this communication is that much of the "stupidity"—the sort of stupidity teachers encounter—is of their own and others making; that we in our stupidity bring about a state of things we deplore, and in our stupidity fail to see that we have done so.

The dullness complained of by medical teachers is the result of a long chain of causes operating through the greater part of the life of the individual up to the time that he enters college and continued there. A child for some months after birth is little more than a bundle of reflexes; later, it begins to receive sensations consciously, and this goes on, the conscious element gaining in strength and the *natural* unfolding of the mind taking place till that first important era begins—going to school. At once there is an enforced arrest of this natural development. Instead of objects, the child is given words and other *forms;* abstract ideas are substituted for concrete ones, and hazy notions for genuine conceptions that can be grasped. An actual experimental test by a well-known professor of psychology has shown that children under eight years of age, and especially in cities, have often the most incorrect notions of the significations of the words they use ; and when this experiment is pushed further—indeed, when it is carried on in the college class-room—the same is observed Throughout our entire educational system, forms—empty forms in many cases—are the only substitutes for real ideas coming through the natural avenues to the mind.

Further in our modern system, so many subjects are presented, the mind is obliged to go with such rapidity from one subject to another that there is not time to acquire well any one thing ; hence more haziness and abounding superficiality.

Now, is it *reasonable* to expect that with such a system of education we can do other than form stupidity ? We entirely pervert nature. The only really rational system of education ever devised for youth was that of Frœbel, the Kindergarten system. It was framed by a man whose loving contact with children gave him a true insight into their minds. But this system is departed from in the public schools, the higher schools and the colleges. It is not, of course, possible, in a communication of this kind, to occupy space with illustrations to make matters plain. But now as to the college, and let us say the medical college. The only subject in which, up to the present time, a student, even the most zealous, can get his ideas in the *natural way—i.e., with a basis in sense perceptions*—is that of anatomy. The principle of work in this department has long been correct, but the execution of it has been time-consuming and crude ; but it did not, at least of itself, induce stupidity to any great degree. This was probably owing to the genius of John Hunter and a few like him rather than to the sagacity of anatomists in general as teachers, for they seem to have made very slow advances in the teaching of that subject as compared with what has been achieved in some others of late ; but be that as it may, it remains that to-day in almost every department the medical student is obliged, even yet, to accept to a large degree forms for substance—the abstract for the concrete, and husks, consequently, for corn—and yet we wonder that he is stupid. I confess I am surprised that he is not more so! It is to be understood that in some schools greater advances have been made than in others—*e.g.*, in several now, a student can really investigate for himself diseased objects (patients) ;—he can get a little, very little, practical knowledge of chemistry, and in a few schools, of physiology. But as a rule, he is asked to stuff into his mind certain statements of these experimental sciences, as so many dogmas, often without a shred of evidence for the views he is asked to accept. Indeed we have heard professors maintain that it was unwise, and impossible, in fact, to attempt successfully anything of the kind. Yet we call the natural revolt of a young mind from this crushing process "stupidity." Here, indeed, is stupidity, but not on the part of the student.

Now, why are these things so? Here, again, we have a long chain: parents not understanding the mind, teachers and the framers of school systems in the same position, or seeing the evil, unable in consequence of the state of public opinion to alter it. As for the medical schools,—there are too many for the needs of the community; hence an inadequate supply of enlightened and competent teachers; a course altogether too short for what is required to be taught, owing to competition between the schools, etc. As the schools in Canada, at least, are in many respects (length of courses, number of lectures, etc.) regulated by the professional boards, it is difficult for them to rise above the conceptions of the profession at large as to what education should be. Physicians, as a rule, are too busy with practice to give thoughtful attention to such things; often, however, they seek a controlling influence.

Now while in medical schools men of the highest ability, both natural and acquired, may sometimes be found, our system does not provide *any means of determining*, by any necessary process at least, whether a candidate for the position of professor has any of the natural or acquired gifts of the *teacher*. In Germany a man never becomes a professor at one bound; and in France the professors are chosen, not alone for knowledge and ability, but for *demonstrated* capacity to teach.

It cannot be denied that many a man has been chosen for the important position of a former of the minds of young men, as physicians, largely because, in the opinion of his professional *con-*

frères, he was a "nice fellow," which meant, possibly, that he regulated his conduct by such standards as were in harmony with their personal views and habits; while we have known men of acknowledged fitness opposed because they had fixed principles of conduct and governed their lives by something higher than the morality, etc., of a local clique.

There is something radically wrong, too, about these examinations on which we set such store. In the first place, the *retaining capacity* for those ideas which to the student are largely forms of words, is at too high a premium. We do not test men enough as to power to apply their knowledge—their capacity to meet varying conditions; in fact, we do not train men in that—and there is not the time for it so long as so much is required—so large an area of study covered. The session must be lengthened or the breadth of acquirements expected diminished. There is also too much professorial and too little tutorial work done. It is absurd to expect youths of the attainments and mental grasp of those that come to medical schools to assimilate even the best teaching without the frequent mental clarification of a thorough quizzing, combined with other methods. Students should be encouraged to read text-books more and to depend less on lecture notes. The highest function of a professor is not to instruct, but to stimulate, to guide, to determine the texture of the student's thought. But when, as I am told is the case, the teachers of a single department reject at their examinations 25, 30, and even 40 per cent. of the very students *taught by themselves*, there must be something radically wrong somewhere. I, for one, shall never believe that 40 per cent. of my fellows are stupids; but I do believe there is an enormous amount of *organized stupidity* in our whole educational system.

I must apologise, Sirs, for the length of this letter, though I have expressed but a tithe of what I have long felt keenly. Let teachers correct themselves before they talk so freely of the stupidity of their students.

I am,
Yours sincerely,
OBSERVER.

Reviews and Notices of Books.

A Text-Book of Pathological Anatomy and Pathogenesis.—By ERNST ZIEGLER. Translated and edited for English students by DONALD MACALISTER, M.A., M.D. Three parts complete in one volume. With 289 illustrations. New York: Wm. Wood & Co.

The publishers have done a good service in giving to the profession in a completed form Professor Ziegler's entire work on Pathology. We know of no work in any language which so fully and completely represents the pathological knowledge of the day. Dr. Macalister's translation has from many quarters been highly praised. The English work is, however, much more than a translation; there are many and important additions to the original German work by Dr. Macalister.

A Compend of Surgery for Students and Physicians. —By ORVILLE HOWITZ, B.S., M.D., Demonstrator of Anatomy, Jefferson Medical College, Philadelphia, &c. Third edition; revised, enlarged and improved, With 91 illustrations. Philadelphia: P. Blakiston, Son & Co.

One of the earlier editions of this compend was fully and favorably noticed in this JOURNAL. The present issue is much more complete than either of the preceding, although there is still ample room for improvement. Thus, for instance, the important subject of dislocation of the humerus is very much mixed and made almost unintelligible. We believe that subcracoid dislocations are more common than subplenoid, and we think we are supported in our belief by some very able surgeons, Bryant amongst them. Then figure 27 is very misleading, as old dis_locations necessitating the use of the pulley are not mentioned in the context. The article on diseases of the spine needs rewriting. We would humbly suggest that a description of angular curvature might with propriety precede that of psoas and lumbar abscess. The present arrangement is apt to be confusing.

We are not partial to compends, as we believe they make lazy students and encourage cramming. However, if we must have a compend of surgery we prefer the one under review.

Maternity, Infancy, Childhood, Hygiene of Pregnancy, Nursing and Weaning of Infants; the Care of Children in Health and Disease. Adapted especially to the use of mothers and training schools for nurses, as an aid to the teaching of the nursing of women and children.—By J. M. Keating, M.D. Philadelphia: J. B. Lippincott Company.

The profession have long been in want of a small, clearly-written book on the above subjects to recommend to their patients. The above, better than any other we have seen, seems to supply that want. It contains chapters on pregnancy, care of the new-born, bottle-feeding, weaning, hygiene teething, diet after dentition, and care of the bowels. In the third part on childhood, it has chapters on nasal catarrh, disease of eye and ear, of throat and air passages, on diarrhœa, the several infectious diseases, on second dentition, and on puberty. In all, the advice is supposed to supplement only, not to supplant, that of the family physician.

Treatment of Disease in Children, including the outlines of Diagnosis and the chief Pathological differences between Children and Adults.—By Angel Money, M.D., M.R.C.P., Assistant Physician to the Hospital for Sick Children, Great Ormond Street, and to the Victoria Park Chest Hospital. London: H. K. Lewis.

This is one of the best of Lewis's practical series, and can be thoroughly recommended to both the advanced student and the practitioner. We gladly welcome it as coming from the Great Ormond Street Hospital for Sick Children, for since the classical work of West, with the exception of occasional papers by Gee and Barlow, none of the physicians in attendance have given us the result of what must be their large experience in children's diseases. The present volume is tersely written, suggestive and eminently practical in its teaching, and although stating fully the opinions of others, gives no uncertain sound as to the course the author's experience has led him to adopt. Much importance is given throughout to hygiene and nursing, and exact instructions for each disease are given in detail. Then follow the indications for the medicinal treatment; the several drugs which may be suitable are referred to, and the indications for and against their use stated clearly. Many approved formulæ are given. In diagnosis, the important points are well stated; and we have read with much interest the author's statements of the pathological differences between the course and tendency of disease in adult and child life (*e.g.*, articular rheumatism.)

Notwithstanding the author's protest in the beginning against the use of nauseous drugs for children, on reading over some of his formulæ, we confess to having a sympathy for the child who replied to the doctor's persuasion to take some medicine with "take that 'oor own 'elf;" and exactly why the chapters on diseases of the new-born and diseases of the skin should be interposed between those on diseases of the respiratory and circulatory systems and of the stomach we do not apprehend. However, the index is a good one, and the headings of the several paragraphs make reference very easy.

Earth as a Topical Application in Surgery.—By A. M. Hewson, M.D. Second edition. With four photo-relief illustrations. Philadelphia: The Medical Register Co.

Had this book been published a century ago it wovld doubtless have attracted considerable attention among surgeons. In this age of bacteriology and antisepsis, however, its teaching falls flat and will be barren of results outside the author's limited sphere. We can understand that the application of earth to sloughing ulcers and grangrenous tissues would be excellent practice, but there can be no excuse for its employment to fresh wounds and amputations when antiseptic dressings can now-a-days be so readily obtained in all parts of the globe. Earth as a disinfectant is well known, but earth as an antiseptic we fail to understand. However, the cases reported are well worthy of perusal and the photographs are excellent.

Books and Pamphlets Received.

ON FEVERS: Their History, Etiology, Diagnosis, Prognosis and Treatment. By Alex. Collie, M.D. With colored plates. London, H. K. Lewis.

EVACUANT MEDICATION (Cathartics and Emetics). By Henry M. Field, M.D., Professor of Therapeutics, Dartmouth Medical College. Philadelphia, P. Blakiston, Son & Co.

THE PHYSICIAN'S DOSE AND SYMPTOM BOOK. By Joseph H. Uzthe, M.D. Philadelphia, P. Blakiston, Son & Co.

ANATOMY, Descriptive and Topographical, in 625 illustrations. By Carl Heitzmann, M.D. English edition by Louis Heitzmann, M.D. New York, J. H. Vail & Co.

TRANSACTIONS OF THE TEXAS STATE MEDICAL ASSOCIATION. Eighteenth Annual Session, 1886. Austin: Printed for the Association.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, Feb. 25th, 1887.

J. C. CAMERON, M.D., PRESIDENT, IN THE CHAIR.

Heredity.—DR. W. G. JOHNSTON read a short paper on "Heredity of Acquired Peculiarities," which appeared in full in the April number of this JOURNAL.

Discussion.—DR. SHEPHERD stated that those anatomical peculiarities which are characteristic of inferior animals are often transmitted for many generations; for instance, he had traced for two generations a well-marked supra-condyloid process. Deformities in the fingers and toes were often transmitted from one generation to another. He cited an instance where he had performed tenotomy for a peculiar formation of the toes in two generations. He knew of a family, each member of which was characterized for three generations by a preternaturally long first toe possessing prehensile power.

DR. MILLS said that Darwin did not seem to have been strongly given to speculation, and did not strive after a *final* explanation of his hypothesis. His Pangenesis, as an explanation of the facts of organic evolution, was by many biologists regarded as weak and unworthy of him. Brooks had attempted to show that the male generative element was concerned in *originating* variations, the female in *preserving* the existing form. If this were true, important conclusions followed. Medical men might throw some light on this and kindred matters. Dr. Hughlings Jackson had applied evolution to the discussion of diseases of the nervous system in his usual masterly manner. Inasmuch as morphological explanations never can be final, it was remarkable that physiological solutions had not been invoked prior to this time. Dr. Mills believed the solution must eventually come through physiology; in fact, quite recently Dr. Romanes had introduced "physiological selection" as supplementary to "natural selection," etc. Certainly at the present time the most thoughtful biologists feel the need of something additional to the Darwinian factors to give a complete explanation of organic evolution which might now be considered, as Huxley called it, a "demonstration." Dr. Mills thought the time had now come for medical societies to discuss such broad generalizations of science in their bearing on their own science and profession. The question of the heredity or non-heredity of acquired peculiarities was especially within the scope of physicians, and one they could do much towards settling. He hoped to be able to lay before the Society some views of his own on the subject of organic evolution in some of its aspects at a future time.

Dr. Trenholme, referring to Brooks' theory, stated that he had noticed several cases where the permanence was on the male side. He had in one case traced polydactylism through three generations on the male side, and in another case the male members of a family were for several generations characterized by peculiar teeth.

Dr. Hingston referred to the fact that the practice of flat-headed Indians of flattening the frontal bone of their infants for many generations had not produced any permanent change in the shape of their heads. Infants were born still with perfectly round heads.

"*Some of the Present Aspects of Surgery.*"—Dr. Hingston then read the following paper on this subject:

The aspects of a science or of an art are as the aspects of a country; not being always objective are not always the same—for the subject, seeing, has views of his own, habits of vision as it were, and these, unconsciously to himself, perhaps, change and color the prospective. I am as one, and only one of those observers, and the field of observation—chiefly *ultra mare*—is the scene of former and more lengthened residence. During my recent visit to Europe, after an interval of nineteen years, I perceived, or fancied I perceived among individuals in the higher walks of the profession, whether met with in society or at their own homes, a greater seriousness—a greater earnestness than on former occasions. Or was it that those intervening years had changed the mode of vision in the observer ? The friction of mind against mind is seemingly incessant. The struggle for position is unremitting—rendered the more necessary by the increased and steadily increasing cost of living, and almost *pari passu*, the steadily increasing number of votaries to the healing art. The large incomes enjoyed—not always enjoyed, but always slaved for—by a limited few, have caused recruits innumerable, each one hoping to achieve distinction, as in the time of Napoleon the humblest soldier was animated with a hope of one day exchanging his musket for the *baton* of the marshal. Although great courtesy characterizes the relationship of members of the profession with one another, there are few who are not keenly alive to the necessity of continued effort for supremacy, as well as for its recognition ; and self-assertion, though clothed with becoming modesty, is not always absent from the highest and most conservative ranks of the profession. But plain, honest thought—most markedly in Great Britain—finds plain, honest expression at all the meetings of societies I attended. Vague statements are unheeded ; and if imagination is suspected as a possible source of stated fact, a clapping of hands is an indication of *that fact* having been duly noted. The most imaginative could not devise a readier method of expression than the clapping, graduated on a crescendo scale, which marks distrust or disapproval ; and tediousness or irrelevancy receives a quietus in the same way.

The vast strides in the study of minute and morbid anatomy, and in special and general pathology, have opened up newer and, it is said, more profitable fields of professional labor. The growth and multiplication of specialties are prodigious. The three divisions of physician, surgeon and accoucheur ; the subdivision of eye and ear surgery, and afterwards the further separation of the two latter, are no longer adequate to express the numerous subsections of professional work. On former visits I usually spent an hour or two a day with Sichel, Desmarres, or Graefe over the eye; with Wilde or Toynbee in studying the ear; while a Stokes, a Graves, a Trousseau or a Schönlein was, in our then benighted condition, deemed fit to teach the practice of medicine in general; and a Syme, a Velpeau or a Langenbeck was supposed to be quite abreast of general surgery. Now, all is changed, and perched on every barleycorn of vantage ground the specialist works in a narrower, a more restricted sphere, seeing clearer, no doubt, what he *does* see, but with less acquaintance, it is said, with the ailments of other organs with which his own may be intimately connected. Yet the labors of the specialist—each in his own department—have greatly advanced the general stock of knowledge. The all-around man is becoming a *rara avis;* yet when a Jonathan Hutchinson appears, going to and from the meetings of the British Medical Association, he is greeted by physician and surgeon alike as one who, in his day, has touched many things pertaining to both medicine and surgery, yet of whom it may be said, *nec tetiget quod non ornavit.* It is men such as he who show us how the various branches of our art are mutually dependent, and how they correct, reform and reclaim each other. The newer and more inviting fields of special work are, in Great Britain, drawing into their ranks, at a rapid rate, men who will be competitors in those ranks. There must soon be a limit to subdivision. The story told a few years ago of a lady in London who had given her lungs to one physician, her liver to a second, her heart to a third, her womb to a fourth, and so on, would now be strange in the atmosphere of refined life, were she so incautious and so ill-informed as to confide the whole of any organ to a single individual.

Now and then, as you are aware, efforts are made in the direction of synthetizing diseases. Thus Erasmus Wilson, in his old age—and it was a richer legacy than that represented by his Cleopatra's needle,—reduced, for therapeutic purposes, diseases of the skin to *four* clearly and easily understood heads. The whole was contained in a few duodecimo pages. Eczema was grouped naturally under one of them, and I much doubt if any of the octavo volumes on that disease alone have contained more matter for the practising physician than the few lines in question. No one is still doing more to harmonize medicine and surgery than Sir James Paget, who draws from pathological anatomy and from clinical pathology, whether for the use of the experimentalist, the chemist, or the microscopist.

Great advances have been made in the diagnosis of diseases of the different cavities of the body ; but in the exploration of mucous inlets, as the nose, larynx, trachea, urethra, bladder or vagina, I failed to notice any advantages not within the *portée* of practitioners twenty years ago.

The *principles* of treatment are not now much better understood, although *diagnosis* may have outstripped its former self by many a stride. With the greatly increased facilities for the investigation of disease ; with the improvements in the methods of diagnosis, and with the application of direct methods of treatment, initiation is sometimes shrouded in well-intentioned mystery. For instance, in a specular examination of one of the mucous inlets, there was an arrangement of mirrors which reflected the electric light *four* times before it reached the mucous membrane. The green baized drapery completed the illusion ; and the fee was larger, possibly, than if the examination had been gone through with direct light or with light once reflected.

The separation of medicine, as a whole, from surgery, as a whole, seemed destined to be complete and irreparable. But it is not so. Handmaids of each other they must ever remain ; again, a tendency is noticeable of an *approchement*, and this time by the invasion by the surgeon of the domain of medicine.

The lines which separate specialties are, as I have said, narrow, short, yet well defined. They are steadily becoming narrower, shorter, and still more defined as between specialties, and especially surgical specialties. That the public is a gainer is much doubted. But while the lines which confine specialism within steadily narrowing limits are becoming more defined, the lines which separate medicine, as a whole, from surgery, as a whole,—even in those departments in which, till recently, the physician tolerated not the aid or intervention of the surgeon,—

the latter has dared to enter, and with advantage, the domain of the physician. Not many years ago, for instance, in all affections of the chest or abdomen requiring manual interference, the surgeon was sent for, and the operation was performed at the request and under the guidance and direction of the physician whose diagnosis was followed, and who had called in the surgeon to do that which required a cooler nerve or a more dexterous hand than that possessed by himself. How is it now? The surgeon's knowledge of *internal* derangements within the skull, chest or abdomen requires to be so precise that skill in operating must wait upon, and be preceded by great accuracy in diagnosis. The surgeon who trephines the skull, cuts through its membranes and removes a tumor from the brain; or who sends a bistoury through its substance to an abscess, does that which requires no extraordinary manual skill or dexterity—a butcher or a butcher's boy could do it as well. But the exact, the precise localizing of disease within the brain, by the correct interpretation of disturbance of function *at a distance*, is one of the greatest triumphs of modern surgery, and is a step towards its recognition as a science as well as an art. The domain of the surgeon is therefore steadily extending, and fractures, dislocations and excisions of tumors no longer limit the field of his labors.

It would be inconsistent with the time at my disposal to traverse the field of practical surgery, to point out what might be considered encroachments upon the territory of the physician. I shall only allude to those instances where, till recently, medicine, and medicine alone, was relied upon for relief.

In chest affections requiring surgical interference, diagnosis must be clear and precise. In empyema, for instance, not alone must the quantity and situation, but even the quality of the fluid be made out before proceeding to operation. In bronchiectasis of the lung, where the difficulty of diagnosis is admittedly great, it must be precise before resorting to any operative procedure. Here, again, the surgeon, although he may receive aid in determining the exact site and nature of the disease, must rely upon his own diagnosis chiefly, if not entirely.

In local peritonitis, what could be more daring, more surprising, yet more satisfactory than Mr. Lawson Tait's thrusting a bistoury into the groin of a woman laboring under all the symptoms of puerperal fever, where he suspected pus by the symptoms alone, but where, as he told me, there were no outward signs of its presence; no swelling, and no local tenderness. From a condition almost of collapse, recovery took place. The operation was not, 'tis true, a difficult one. Anyone could have performed it; but the diagnosis was prophetic.

The case of Dr. Leslie Phillips, operated upon by John W. Taylor, F.R.C.S., is of like character; and now that attention has been directed to the subject, and that surgery has taught a means of escape, deaths from supposed puerperal fever will, it is hoped, be less frequent than formerly. Here, as you will see, surgery comes to the relief of the obstetric physician in cases which are peculiarly within the province of the latter.

In diseases of the abdominal organs, how much has lately been done by surgery. Hepatitis, with all its train of sufferings, was claimed by medicine as its own; but surgery of the liver has suddenly leaped into importance lately. A painful, inflamed and enlarged liver is now relieved by Harley and others, and the patient cured by the insertion into it, at its upper and convex part, of a long trocar, and by the drawing directly therefrom as large a quantity of blood as was considered prudent to be taken from the arm in the days of venesection. Operation for draining hepatic abscesses or removing hepatic cysts; cholecystotomy for crushing or taking calculi from the gall-bladder; laparotomy for purulent or persistent peritonitis; abdominal sections for internal hemorrhage, etc., are all of recent date, and open a field, not of brilliant operative procedures, but of more brilliant diagnosis, and what is of greater moment, of far more beneficial results.

The considerable degree of immunity from danger which has attended abdominal sections has led to the spaying of females—married and unmarried—for sometimes real—sometimes, it is believed, unreal sufferings. This operation has been performed for objective disturbances and for disturbances purely subjective. Prolapsus of the ovary, a common affection; atrophy of the ovary, not easily diagnosed; œdematous ovary; a pultaceous condition of the ovary; cirrhotic ovary; hydrosalpinx; in pyosalpinx *pur et simple*, often guessed at by raised temperature alone; in pyosalpinx resulting from gonorrhœa; in that condition of neurosis whose shapes are endless and whose outward hysterical manifestations are innumerable; in localized peritonitis, where the intestines, omentum, etc., are glued together, etc.; in inflammatory conditions after confinement, especially in the acute and subacute stage; in deformity, where the birth of a living child might be *reasonably* expected to prove fatal to the mother; in uterine myomata, where the size of the growth is inconvenient; in bleeding myomata; in (who would believe it?) all cases of uterine myomata in patients under 40 years of age; in retroflexed and anteflexed uterus; in epilepsy; in hystero-epilepsy; in every case of insanity in the female!!

Here, as you will perceive, I have said nothing of those considerable tumors of the ovary or tubes—cystic, fibrocystic or malignant—which all agree may demand removal. Is it to be wondered at that this operation should be resorted to with a frequency which is alarming? Oöphorectomy is to-day epidemic in many places on the other and on this side of the Atlantic. Occasionally an authority, such as Thomas More Madden, in Europe writes that the operation of laparotomy is performed "too frequently" and in unsuitable cases; and Emmet, on this side, stems the tide somewhat by saying that for a year he had seen but one case of disease of the tubes where the operation might be justifiable, that the patient refused to be operated upon, and got well in a few months. Yet every one knows Emmet's unsurpassed field of clinical observation. In one hospital in Liverpool, says Dr. Carter, no less than 111 women had been deprived of one or both ovaries during the year 1885, said to be about one-third of all the patients admitted. This frequency continued in 1886, and led to a commission of enquiry. Canada has many oöphorectomists and salpingotomists. The *Canada Lancet* has denounced the epidemic, and at our own Medico-Chirurgical Society ovaries are sometimes fished up from the depths of the pocket—sometimes the vest pocket,—and sometimes it has happened that so able a pathologist as Prof. Osler has, after close inspection, declared he found nothing abnormal in them. The fashion, doubtless, will soon change; diagnosis of affections of the appendages will, in the meantime, have been much advanced; and the question of operation will have been settled in accordance with those general principles which should guide all prudent and honorable men in its performance or rejection. This question has a moral and a social as well as a medical aspect; but I do not arrogate to myself any preparedness not possessed by others. I may say, however, I have more than once prevented the operation, and I have been afterwards thanked for it, and another then unborn generation has been advantaged by it. I admit there are cases where a diseased condition of the ovaries or tubes demands surgical interference; but those are not cases where every objective sign is absent, and where the symptoms detailed by a hysterical woman are the only guide.

Discussion.—DR. TRENHOLME did not believe that gynæcology, as a branch of surgery, would ever lose its importance; its utility was undoubted. With regard to spaying, the speaker expressed his belief that it would be better if every insane person could be prevented from propagating his species, and the same could be said of criminals. He gave an account of a case where one noted criminal marrying another had given rise to a race of no fewer than 176 noted criminals, male and female. With regard to the utility of abdominal sections, he could only say that in his experience more than 90 per cent. were cured of undoubted and often intense suffering. He did not think that patients suffering from pyosalpinx or hydrosalpinx when over 40 years of age required operative measures, but believed in operating on in all cases where patient was 28 to 30 years old.

DR. GARDNER agreed with Dr. Hingston that there should be objective signs to justify operation, except in a few cases—*e.g.*, cirrhotic ovaries. Dr. Bantock gives many cases of diminution of ovaries which produced intense suffering, but which were cured by operation. With regard to the removal of ovaries for myomata, it is known that many myomata may exist for life without producing the smallest danger or even discomfort. On the other hand, these tumors may produce dangerous hemorrhages or intense pain, and ovariotomy, as a rule, gives relief. With regard to the neuroses, we have still much to learn about the effect of the ovaries on the nervous system. Pelvic pain is often undoubtedly of central origin, yet in many cases it is due to the ovaries. In selecting proper cases for operation in neuroses, we require experience. This, however, will come in time.

Dr. Shepherd remarked that nervous affections were now treated by operations on the eyes instead of ovariotomies. Cutting the eye muscles is a recent mode of treatment for epilepsy and insanity. Many cures are claimed for this method of treatment.

Dr. Hingston, in reply, stated that he did not wish to depreciate gynæcology, but he did wish to denounce this wholesale operation for subjective symptoms. Such recognized authorities as Spencer Wells, Keith and Emmet speak in much stronger terms than he. The *London Lancet* has for some time refused to publish the papers of these wholesale ovariotomists. He believed that if men like Lawson Tait and Savage, who operate for subjective symptoms, are to be imitated by men with less judgment, it would lead to unlimited operating. Every hysterical girl with pelvic pain would be a fit subject for ovariotomy. With regard to ovarian fibroma, he could cite very many cases in his own practice of women who have had uterine fibromata all their lives without causing them any discomfort. Otis claims to have cured neurosis by circumcision, and contends that many forms of epilepsy can be thus cured. Ovariotomy is the modern fashion in surgery, just as the now almost discarded Syme's external urethrotomy was the fashion a few years ago.

TORONTO MEDICAL SOCIETY.

Stated Meeting, May 12, 1887.

The President, Dr. Nevitt, in the Chair.

Dr. Powell read a paper entitled *Pleurotomy for Empyema, Methods of Drainage, and Report of Cases.* The course of a purulent pleurisy untreated or subjected only to medical treatment was outlined, and the fact that nature could not be trusted to effect a cure was dwelt upon. Surgical aid must be invoked or the prognosis would be practically hopeless. Even this aid, before the general adoption of antiseptic methods, failed to reduce the general mortality 50 per cent. Now and then the reader had an impression that it did not exceed 20 per cent. His own cases, six in number, were given. Four of these were under care from the beginning of the disease, and all recovered with good lung expansion and no chest deformity. The other two were chronic cases and recovered only imperfectly as regards the chest-wall and the lung of the affected side. Syphon drainage was adopted in most of the cases. A large Nelaton catheter having been introduced it was fixed by passing it through a hole punched in a piece of Esmarch bandage, worn like a belt around the chest, as first suggested by Dr. Eby of Rochester. The outer end of the catheter was attached to a glass tube passing through a rubber stopper into a bottle of carbolic solution. The bottle was worn in the hip pocket by patients able to go about. To wash out the chest all that was necessary was to alternately raise and lower the bottle. One of the cases reported had in addition to a large collection of pus in the pleural cavity an interlobar sac not communicating with it. They were drained separately. Attention was called to the fact not yet generally recognized that the line which bounds superiorly the flatness in cases of effusion in the plural cavity is a curved line, rising highest toward the axilla, and not a water-level line. This point was first observed in 1843 by Damaiseau, and independently by Dr. Calvin Ellis, of Boston, in 1876. The Ellis curve had been made out by the reader in every case of pleuritic effusion examined during the last ten years. Diagrams illustrating its location in a number of cases were shown. The importance of an early recognition of notable purulency in an effusion in the chest, its evacuation and continuous drainage, according to recent antiseptic methods, and the obliteration of the cavity by adhesion of its walls, aided if required by irrigation or costal resections, was next taken up, and finally discussion was invited upon aspiration in empyema, syphon drainage, irrigations, free incisions, and antiseptic methods in operating and in after treatment.

CANADA

Medical and Surgical Journal.

MONTREAL, JUNE, 1887.

ROYAL VICTORIA HOSPITAL.

The corporation having granted unconditionally the site, we know of no obstacle remaining to prevent the early consummation of this magnificent scheme. At the last annual meeting of the Governors of the Montreal General Hospital held a few days ago, the Secretary in his report hinted that something in the shape of an amalgamation between the two institutions would be desirable. The idea is a good one, although we see many difficulties in the way if Sir Donald and Sir George adhere to their original plan of naming their own trustees. But they may prefer to remain independent, as the interest that will accrue from their endowment fund will be ample for the support of one hundred and fifty beds. We hope soon to be in a position to give our readers more definite information regarding this princely undertaking.

RECTAL ETHERIZATION.

We think we are justified in stating that this method of producing anæsthesia has been fairly tried and found wanting. It appears never to have been in much favor among English and Continental surgeons, and even the Americans of late have seldom referred to it. It looked at one time as though there might be a great future for it in the surgery of the head and neck but the expectations of the most sanguine have not been realized. It may be that the apparatus has been at fault or the cases have not been selected with sufficient care, looking to the condition of the intestine the want of success of this process is altogether to be very much regretted, as at the time of its introduction the surgeon was promised immunity ever after from the annoyance caused by the ordinary inhaler in such operations as excision of the maxillæ, removal of the tongue, hare-lip, staphylorrhaphy, tracheotomy, etc.

The chief objection made to rectal etherization is the fact that the anæsthetic is little, if at all, under the control of the administrator. In spite of every precaution a large accumulation of the vapor will take place in the intestine producing cyanosis and a long-continued anæsthesia, so profound at times as to cause alarm. Doubtless many of the deaths that have occurred can be attributed to this species of super-saturation. Among the minor objections to this method of administering ether is its irritating effect on the mucous membrane of the bowel, causing a troublesome serous diarrhœa which has been known to last for several days. In one case hemorrhage from the bowel of an alarming nature took place.

Thus although the evidence so far is undoubtedly adverse to the administration of ether per anum, we sincerely trust the idea will not be abandoned, but that other plans and other anæsthetics will be tried, as there is much in the method to commend it to surgeons.

ADAPTATION TO ENVIRONMENT.

The name of Dr. Dallinger is sufficient guarantee of the quality of any microscopical investigation he may carry out. In a recent address before the Royal Microscopical Society he detailed the results of certain experiments indicating how great is the adaptability of organisms to changes of temperature, when such changes are but sufficiently gradual.

For nearly seven years continuous experiments and observations were made, with the result that several organisms had gradually become adapted to live and thrive under a high temperature. Commencing at the normal temperature of 60°F., the first four months were occupied in raising the temperature 10° without altering the life-history. When the temperature of 73° was reached, an adverse influence appeared to be exerted on the vitality and productiveness of the organisms. The heat being kept constant for two months, they regained their full vigor and vitality, and by very gradual stages of increase 78° was reached in five months more. Again a long pause was necessary, and during the period of adaptation a marked development of vacuoles was noticed, which again disappeared when it was possible to raise the temperature farther. The farther history of the experiments presented practically the same features —long pauses, vacuolation, slow advance—until at last the high temperature of 158°F. was reached, when the research was accidentally terminated. It is because it is so difficult to observe the effects of changes through a sufficient number of generations of larger animals that results obtained on the simpler forms are so valuable. Darwin distinctly insisted on the slowness of the process of adaptation. The organisms examined by Dr. Dallinger are incessantly multiplying by dividing, the longest interval being four minutes: half a million generations must therefore have been observed, giving the " countless generations " required. At the end of the series the organisms were found to be fully adapted to a change in the essential condition of life, sufficient to produce death originally.

It seems to us it would be difficult to over-estimate the value of such a series of experiments made by so competent an observer ; not alone on account of the actual results reached, but from their bearing on the great modern theories of Biology. Nor is it difficult to see their intimate relation with studies in Pathology. It becomes daily more apparent that a new era in medicine has dawned, though possibly those on the mountain tops only may adequately realize it.

SYPHILIS AS A CAUSE OF PROGRESSIVE PARALYSIS OF THE INSANE.

In one hundred cases of progressive paralysis, Ziehen of Jena (*Neurologisches Centralblatt*, May 1st, 1887) could trace a distinct history of syphilis in from 33 to 43 per cent. of cases, while in other cases of insanity the proportion of cases where a history of syphilis could be obtained did not exceed 13 per cent. It is well known that frequently progressive paralysis is due to several causes in active operation at the same time (heredity, alcoholism, traumatism, venereal excesses, etc.). Ziehen could only in five cases out of his one hundred exclude every likely cause besides syphilis.

In eight of the above cases, mercurial treatment (friction cure) was employed, with the alleged result that the ordinary remissions were much prolonged in six. Some of the cases were treated with iodide of potassium, and here only about the half were apparently influenced for good. In cases treated by non-specific agents, only 20 per cent. showed distinct remissions.

CANADIAN MEDICAL ASSOCIATION.

The nineteenth annual meeting of the Canadian Medical Association will be held in Hamilton on August 31st and Sept. 1st. This date will enable members to attend also the meting of the International Congress which will be held in Washington on the 5th of September.

GERMAN CONGRESS.

The German Congress for Internal Medicine recently held in Wiesbaden was a very successful gathering both in the number of members who were present and the importance of the papers read. A paper on the Pathology and Therapeutics of Whooping Cough, by Vogel of Munich, attracted great attention.

Fleischer of Erlangen gave the results of a series of experiments on the pathology of kidneys. He considers that anæmia of the brain plays a prominent part in the induction of the convulsions of uræmia.

Cohn of Strassburg, who read a paper on Acids in Cancer of the Stomach, is inclined to look upon the alleged absence of acids in this disease as due to mechanical causes and not to disturbance of the acid secreting functions of the stomach.

Franz, in a paper on "Work or Rest for patients affected with organic Disease of the Heart," contends that slight work slows and strengthens the heart. In the discussion which followed, Leyden of Berlin considered that there is an important therapeutic principle involved in Oertel's treatment of limiting greatly the amount of fluids in beginning organic disease of the heart. We know from Kussmaul's and Tenner's experiments that the most efficient means we possess of lowering tension is a strict adherence to a dry diet. The work required of the heart is therefore much less.

NOTES AND COMMENTS.

The truth about the gas treatment of Phthisis is gradually being threshed out, and it begins to look as if the yield, per acre, was scarcely worth the trouble of harvesting. Dr. Bruen, in whose wards the method has been most extensively tried, tells me that in about 100 cases, two or three only have been benefited. A majority of the patients who at first did so well have relapsed while under treatment, and are as bad as ever. At the University Hospital, Dr. Griffith has been making careful observations in all the cases under treatment, studying particularly the influence on expectoration, weight, fever and the bacilli. The results are practically negative. In two cases only has there been improvement. The subject will be thoroughly discussed at the Association of American Physicians in Washington next week. As I predicted there has been an extraordinary sale of gas bags and a Philadelphia firm sent out 100 sets of the apparatus in one day. The history of the *bubble* should be a warning to Hospital authorities not to permit crack-brained reporters to gather professional items from which to manufacture sensational articles. Dr. McLaughlin, the chief resident Physician at the Philadelphia Hospital, acted most injudiciously in giving to the press the information on which the false statements have been based. I have just received from London a copy of the *Central News* telegram, which was sent from New York in March. Here is the precious document, which for mendacity equals anything which has appeared in the "latest telegraphic news" for, say, twenty-four hours :

" Dr. McLaughlin, head physician of the Philadelphia Hospital, reports the marvellous and unprecedented cure of 30 persons in the last stage of consumption, solely by means of injections of carbonic acid gas. The gas is prepared according to the system described in a recent paper by a professor in the Lyons University. The medical authorities in the hospital express the belief that an absolute cure for consumption has been found."

An interesting and curious book is *Les Demoniaques dans l'Art* by Charot and Richer, in which an attempt is made to prove, by a study of old miniatures, bas-reliefs, bronzes, frescos and engravings, that demoniacal possession was nothing more than a manifestation of *la grande névrose hysterique.* The authors have made a collection of all the representations of the scenes of exorcism from the fifth and sixth centuries onward, particularly of those which illustrate the figures, attitudes and contortions of the possessed. In the earlier ones there is nothing very distinctive; the demon is the important personage and is represented in visible form leaving the man's body either by the mouth or through the top of the head. Several illustrations of the 11th and 12th centuries gives a tolerably accurate representation of the attitude of the body in hystero-epilepsy. St. Charles Borromée—a well remembered Saint in Montreal—figures as a very active exorcist. Among later engravings which are reproduced, the most interesting are those of St. Vitus' Dance, epidemics of which prevailed so extensively in the Rhine provinces in the 14th, 15th and 16th centuries. Oddly enough, an annual pilgrimage of dancers is still made at Easter to the old shrine of St. Willibrod, in Luxembourg. The pictorial evidence, so far as it goes, strongly supports the view that certain phases of demoniacal possession of the early and middle ages were manifestations of hysteria. On the other hand, I dare say there are physicians, without the gifts of exorcism of Weir Mitchell and Charcot, whose bitter experience inclines them to believe that some of the cases of modern hysteria are instances of demoniacal possession.

The late Dr. Moxon, of Guy's Hospital, was not only a deep thinker but a master with pen and tongue of vigorous English.

Under the odd title *Pilocereus senilis* has appeared a small volume of his essays which will prove pleasant and profitable reading "between the pains." The title was the *nom de plume* under which many of the articles appeared in the Guy's Hospital Gazette. The discussion which arose as to its origin has been settled by Mr. Clement Lucas, who states that one day at Kew, Dr. Moxon was greatly struck with the wise and antiquated appearance of the hoary-headed Cactus, *Pilocereus senilis*, and subsequently adopted its name as a cloak for his philosophical reflections.

Whether Dermatology belongs properly to the physician or to the surgeon is not yet settled. If we may judge from the monographs and text-books, the physicians appear to be doing a large part of the work. Dr. McCall Anderson, of Glasgow, a clinical physician, has just issued a large treatise on Diseases of the Skin, one of the most complete and practical works on the subject which has appeared. Though not strictly a specialist, Dr. Anderson is a well known authority in the branch in which he has enjoyed an exceptional experience.

Death has been busy in our ranks.

In Wilson Fox the profession of London loses a bright ornament and University College one of its ablest teachers. He had achieved success, professional and—so important in London—social, and the highest prizes were within his grasp. The road to the *very top* in the metropolis is so steep and thorny that in the rough ascent bodily stamina counts for much; and to break down within sight of the summit, seems particularly hard. Dr. Fox had never been very robust, and a pneumonia, with endocardial complication, in 1876 was a severe trial, and in his final illness the fatal result seems to have been due to the cardiac weakness rather than the acute pneumonia. He will be remembered chiefly by his work on tubercle and as the stout opponent of Niemeyer's views, and it was with no little satisfaction that he saw a return, after Koch's investigation to the belief in the specific nature of tuberculous processes. For years he had been preparing a treatise on disease of the lungs, and it is sincerely to be hoped that the materials have been left in a form available for publication. Those who enjoyed the privilege of following him in the wards will remember him as a clear and impressive teacher. When I look back, through the mist, to 1872-73 and try to recall specific days and hours, there are few which return with greater distinctness than those in which I see Wilson Fox standing at the head of a bed at University College Hospital, unravelling for the class the complicated symptoms of some chest case. He had a refinement and charm of manner particularly attractive. Something of the gentle spirit of the great Friend, whose name he bore, and into whose Society he was born, pervaded his nature and there was a kindliness in his manner which won the hearts alike of students and of patients.

The late Dr. John Fulton of Toronto was the first really successful medical journalist which Canada has produced. From 1826, when Xavier Tessier issued his ambitious *Quebec Medical Journal*, to 1870, when John Fulton took in hand that rickety suckling, the *Dominion Medical Journal*, the profession had sought in vain for a man who combined business talents with editorial capacity. As editor of the *British-American Medical Journal*, Hall had been conspicuously successful, but increasing expenditure and diminishing receipts twice caused him to give up the struggle. The *Montreal Medical Gazette*, the *Upper Canada Medical Journal*, the *Medical Chronicle*, *La Lancette Canadienne*, the *Provincial Medical Journal*, and *L'Abeille Médicale*, died of inanition. *Primæ viæ* defective; no digestion; tabes mesenterica; good head, no nourishment; in other words, plenty of editorial matter, but no cash in the till. The business interests *had never been given first place.* Dr. Fulton made the *Canada Lancet* a success by able management and by fostering the pecuniary as well as the literary interests. He saw there was a fine field in Canada for a pushing journal, and he entered in and took possession. His life has a lesson for us all—the lesson that success cometh neither from the east nor from the west, nor yet from the south, but is found in a close attention to the every-day details of life, no matter how trivial.

WILLIAM OSLER.

Medical Items.

—T. Johnson Alloway, M.D., has been appointed Assistant Surgeon of the Montreal General Hospital, vice Dr. Girdwood, appointed Consulting Surgeon.

—Dr. James Stewart has been appointed Assistant Physician of the Montreal General Hospital, vice Dr. J. C. Cameron, appointed Consulting Physician.

ROYAL SOCIETY OF CANADA.—The following are the officers of the Royal Society for the current year:—President, Dr. Lawson, Professor of Botany, Dalhousie College, N.S. Vice-President, Sandford Fleming. Secretary, Dr. J. G. Bourinot. Treasurer, Dr. J. A. Grant.

—Dr. D. C. Lane reports a case in which a patient shot the doctor who castrated him. Yet the operation was done for incurable disease of the testes, and with the full consent of the patient and his friends. Dangerous operation to the operator.

—As a rule, the doctors who, as a class, have the largest balance of net financial gain at the end of each year are country doctors. Nearly all city doctors who become rich do so by fortunate investments in real estate or some business enterprise outside of their profession.

—The Lewiston journals say that a man blew up a doctor's office with dynamite because the latter was out of town when the man's child was sick. It was claimed that had the doctor been at home the child would not have died. The man got a sentence of twenty years free service of the State of Maine.

—The *Alienist* suggests that to prevent quarrels in the profession, the students should be kept long enough in medical college to learn professional etiquette. Then when men are properly educated quarrels will be distasteful, for the reason that they waste time desired for medical study and advancement.

CANADA

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Original Communications.

REPORT OF THE UNIVERSITY LYING-IN HOSPITAL, MONTREAL, FROM OCTOBER 1st, 1875, TO OCTOBER 1st, 1883.

By D. C. MacCallum, M.D., M.R.C.S., Eng.,
Emeritus Professor of Midwifery and the Diseases of Women and Children, McGill University, Consulting Physician Montreal General Hospital, University Maternity, &c., &c.

I have already published a report of the first eight years of the sixteen during which the University Lying-in Hospital was under my supervision, and the present report embraces the statistics of the hospital for the remaining eight years, with a summary of the results for the entire sixteen years.

From October 1st, 1875, to October 1st, 1883, there were 725 women delivered in the hospital. Of these, 716 made good recoveries and 9 died ; the mortality being in the proportion of 1 in 80½ cases, or 1.24 per cent. Of 728 children born, 694 presented the vertex, 18 the breech, 13 the feet, 1 the shoulder, 1 the face, and 1 the funis. There were 3 twin births. 688 children were born living—367 males and 321 females. The still births were 40, 24 males and 16 females ; the proportion of still births to living children being 1 to 17. The average length of the children was—males, 21 inches ; females, 19½ inches. The average weight—males, 7 lbs. 9½ ozs ; females, 7 lbs. 7 oz ; 54 males and 43 females weighed 9 lbs. and upwards. The heaviest male child weighed 11 lbs. 7 oz. ; the heaviest female, 11 lbs. 14 oz. The average duration of labor in 714 cases was 9 hours and 13 minutes. The average weight of the placenta was 1 lb. 7 oz., and the average length of the cord was 20¼ inches. There were eight placentæ born with single children each weighing over 3 lbs. The two heaviest weighed 4 lbs. each. There was also a single placenta accompanying a twin birth which weighed 4 lbs. 6 oz. The shortest cord measured 9 inches; the longest 41 inches.

The *forceps* was applied to complete the delivery in 17 cases, or in the proportion of 1 in 43 cases. Fifteen of these cases were primiparæ and two multiparæ. All the mothers recovered with one exception, and ten of the children were lost. Tarnier's axis-traction forceps was applied in two cases where the head of the child was arrested in the brim of the pelvis from narrowing of the conjugate diameter, and was found to work well.

Version of the child was performed twice; once in a case of presentation of the shoulder and once after failure to extract with the forceps.

Post-partum hemorrhage occurred in seven cases, or in the proportion of 1 in 103 cases. There were also two cases of accidental hemorrhage.

There were four cases of labor complicated with *convulsions*. Three were primiparæ and one a multipara. In all the mothers recovered. Three children were born living and one was stillborn. In one case the convulsions preceded labor. The patient, aged 30, admitted into the hospital on the 15th of March, 1877, was seized with convulsions on the 18th March, at 8 P.M., before any symptom of labor had occurred. On examination, the urine was found to be highly albuminous. A large dose of calomel and jalap was at once administered, which had a powerful action on the bowels. Half a drachm of the bromide of potassium every second hour, and twenty grains of the hydrate of chloral every fourth hour, were prescribed. The convulsions ceased about 2 P.M. on the 19th March, up to which time she had had twenty-three paroxysms. Labor came on at 5 P.M. of the same day, and she was delivered at 8.20 P.M. Albumen rapidly disappeared from the urine after delivery, and she made a speedy and satisfactory recovery.

There was one case of *epilepsy*, which was interesting from the absence of convulsions during labor. M. T., aged 27 years, confined January 13, 1876, has suffered from epilepsy for the last six years. Has had four seizures since she became pregnant: one occurring in June last and three since her admission into the hospital in November. The last attack occurred eight days before labor. There were no convulsions during labor, nor had she a return of her epileptic seizures up to the time of her discharge from the hospital. This patient had a sanguineous discharge, resembling in every respect her usual menstrual discharge, for three consecutive months after having become pregnant.

A very interesting case of complete occlusion of the os uteri, giving rise to difficulty in diagnosis, has also been reported:

E. D., 37 years of age, a strong, healthy-looking woman, was admitted into the hospital on the 6th April pregnant with her first child. She has been married, and has lived continuously with her husband, for a period of twenty years, but has never before conceived; and there are no appearances to indicate that she has ever passed through a previous labor. On the 12th April, six days after admission, she complained of pains resembling those of commencing labor, and a vaginal examination having been made, no dilatation of the os uteri could be detected. These pains passed off in a few hours, and she was quite free from them until the morning of the 23rd of April. At this time they returned with considerable severity, and an examination *per vaginam* revealed what was supposed to be a nearly fully dilated os uteri, very high up, with the bag of membranes protruding into the vagina; and in the intervals between the pains a hard, resisting substance could be felt. After the pains had continued for a period of twenty hours, recurring at long intervals, the os was supposed to be fully dilated, and the child's head could be distinctly felt above what was considered to be the anterior lip of the os uteri. Attempts were made to rupture the bag of membranes with the finger, but these not being successful, a puncture was made with a stylet and a considerable quantity of liquor amnii escaped. The head after this descended lower and the pains increased in frequency and severity. The patient at this time began to exhibit signs of fatigue, and I was sent for to decide what further steps were to be taken. Having been informed of the diagnosis and progress of the case, I had the patient placed under the influence of chloroform, certain that I would have to complete the delivery with the forceps. I then proceeded to make a thorough examination with the hand, and found the head of the child occupying the brim of the pelvis, and covered with a smooth structure that felt very much like thickened membranes. This had a uniform surface, there not being the slightest projection to indicate the situation of a cervix. There was a smooth, rounded fold of the anterior wall of the vagina in close connection with it, which had led to the belief that this fold was the anterior lip of the os. On making a careful exploration of the surface projecting into the vagina, a slight depression was felt by the finger at its upper and posterior part. This point, moreover, was softer and more yielding than the parts surrounding it. Convinced that this was the occluded os uteri, I pressed forcibly on it, when the obstruction yielded and my finger passed through the os into the womb. The patient, having recovered completely from the effects of the chloroform, was ordered 15 grains of the hydrate of chloral every twenty minutes until four doses had been taken. This secured her several hours of sound sleep, from which she awoke greatly refreshed. The pains gradually became stronger and recurred at shorter intervals until about three o'clock the next morning, when the os uteri being fully dilated, the forceps was applied to the head of the child at the brim of the pelvis, and after careful traction for thirty-five minutes the child was delivered. There was no laceration of the cervix uteri nor of the perineum. The patient made a good recovery and left the hospital on the eighth day after her confinement.

Summary of Statistics of Hospital for Sixteen Years, from October 1*st*, 1867, *to October* 1*st*, 1883.

Number of women delivered	1720
“ deaths	17
Mortality	0.99 p.c.

CAUSES OF DEATH—

Puerperal Fever (epidemic)		7
Chronic Bright's Disease—Uræmic Coma	2	
Apoplexy	1	
	—	3
Rupture of Uterus		1
Septicæmia		6
		17

Number of children born	1726
Number of still births	87
Proportion of still births to living children	5 p.c.

Number of children presenting the vertex	1653
“ “ “ “ breech	29
“ “ “ “ feet	20
“ “ “ “ knee	1
“ “ “ “ shoulder	3
“ “ “ “ face	3
“ “ “ “ funis	3
No presentation given	14
	1726

Average length of male children	20¼ inch.
“ “ female “	19 “
“ weight—Male “	7 lbs. 11¼ oz.
Female “	7 “ 9 “
Males weighing 9 lbs. and upwards	159
Females “ “ “	104
Heaviest male child weighed	11 lbs. 12 oz.
“ female “ “	11 lbs. 14 oz.

Average duration of labor	9 hours.
“ weight of placenta	1 lb. 9 oz.
“ length of funis	21½ inch.

Forceps employed in 36 cases	1 in 48
Perforator “ in 1 case	
Version of the child, 4 cases	1 in 430
Post-partum hemorrhage, 13 cases	1 in 132
Accidental hemorrhage, 2 “	1 in 860
Puerperal eclampsia, 11 “	1 in 156
Puerperal insanity, 3 “	1 in 513

REMARKS.

Although the death rate of the University Lying-in Hospital for sixteen years compares favorably with that of similar institutions in Europe and America, the mortality for the first twelve was markedly lower than that for the last four years. Thus from October 1st, 1867, to May 28th, 1879, there were 1,392 women delivered, with ten deaths, a mortality of only 1 in 139, or 0.73 per cent.; and the causes of death were epidemic puerperal fever in seven cases and chronic Bright's disease in the remaining three. Whilst from May 28th, 1879, to October 1st, 1883, there were 328 women delivered, with seven deaths, a mortality of 1 in 47 or 2.14 per cent.; the causes of death being rupture of the uterus in one case and sepsis in six cases.

This remarkable variation in the death-rate of the same institution at different consecutive periods is startling, and demands consideration and explanation. From careful enquiry there does not appear to have been any material difference in the class of patients admitted into the hospital during the two periods. The domestic hygiene, the diet and the nursing of the patients were as carefully attended to in one period as the other. There was no epidemic of puerperal fever in the second period as in the first to account for the mortality, and the deaths from sepsis did not follow each other at short intervals, having occurred at the following dates: May 1879, April 1880, April 1881, December 1881, March 1882, and May 1882.

The only reasonable explanation of the increased mortality during the latter term of four years is, I conceive, the following: The University Lying-in Hospital was partly established, and has always been utilized, for educational purposes, the students of medicine in McGill University having access to its wards, and the Professor of Midwifery in the University holding the position of Physician-Accoucheur to the Hospital. For a long period the resident midwife superintended the ordinary labors, and the students (two in number) who had the charge of each case, although invariably several others were in attendance, were restricted to the number of times they examined the patient *per vaginam*: their hands having been previously cleansed by careful washing with strong carbolic soap and the examining fingers being then anointed with carbolized oil. The patient was carefully syringed twice daily with a solution of the permanganate of potash of the strength of two teaspoonsful of Condy's fluid to a pint of water ; and if there were elevation of temperature, or if the lochia became offensive, the vagina was syringed every fourth hour.

Some years ago it was deemed advisable, with the view of giving the student of medicine a more thorough training in practical midwifery, to appoint an " instructor in midwifery " to the hospital, whose duty it would be to attend each case of labor, demonstrate the progress of parturition, and deliver clinical remarks to the attendant students. The first appointment to this position was made in the year 1878, just at the commencement of that period of four years in which six deaths from sepsis occurred, and during which the death-rate of the hospital was raised from .73 to 2.14 per cent. The more frequent manipulations and greater interference with the patient which such instruction demanded were, in my opinion, the causes of this increased mortality. Indeed, a more striking illustration of the danger to be apprehended in making the parturient woman too thoroughly the subject of practical instruction could not possibly be adduced than that which the statistics of the hospital during these four years has afforded.

The proportion of still-births to living children, as given in the above table, is five per cent. ; but this does not represent exactly the proportion of mature children who were living at the commencement of labor, but who, from various causes, lost their lives during the act of parturition. If from the total number recorded (87) there be deducted 18, some of whom were born prematurely between the 140th and 190th day of gestation, and others with marks of intra-uterine maceration, the proportion would be only four per cent.

During the sixteen years, the cases (41 in number) in which operative interference was demanded recovered ; and there was not a death from hemorrhage, puerperal eclampsia, nor puerperal mania, although the last two occurred in as many as fourteen cases, eclampsia in eleven, and mania in three.

Although there was no strictly routine treatment adopted in the cases of eclampsia, much dependance was placed on the alternate administration of large doses of the hydrate of chloral and the bromide of potassium, particularly after a thorough evacuation of the bowels had been secured. Chloroform was employed when the convulsions occurred during labor, being administered on the approach of each paroxysm, but was suspended on the completion of the delivery. In one case only did the chloral and bromide appear to act injuriously on the patient, and in this case the hypodermic injections of morphia were attended with markedly beneficial effects. Bleeding from the arm was resorted to in two cases. The success which has attended the treatment of cases of eclampsia occurring in the hospital is greatly due to the thoroughness with which the treatment has been carried out by able and intelligent assistants. As soon as a patient was seized with convulsions, a selection was made of four or more advanced students, and to their care the carrying out of the treatment was confided. They relieved each other in relays of two, and kept an accurate record of the progress of the case and the effects of the treatment adopted. Not infrequently the reports of the students in charge led to the adoption of important modifications in the treatment.

LACERATION OF THE CERVIX UTERI.*

By Kenneth N. Fenwick, M.D.,
Professor of Obstetrics and Gynæcology, Royal College of Physicians and Surgeons, Kingston, Ont.

I have been greatly impressed, in studying the subjects of obstetrics and gynæcology, with the fact that so many contributions have come from this side of the Atlantic.

McDowell did the first ovariotomy; Battey the first oöphorectomy; Hodge has immortalized his name in connection with uterine displacements; the invention of the duck-bill speculum by Sims, which by a new principle exposed to view and allowed a more complete examination of the uterus. So great were Sims' contributions to practical gynæcology that it has been said if all he had done were suppressed we should have retrograded a quarter of a century. And, lastly, Emmet has discovered a pathological factor and invented a means of relief which is one of the many gynæcological advances of the last twenty years. Dr. Thomas says the "diagnosis and treatment of lacerated cervix is a pathological contribution which, even if this eminent author had done nothing else to lay his profession under obligation, would indelibly write his name upon the records of gynæcology. No one contribution to this department which has been made in the period mentioned has exerted a more marked influence upon uterine pathology than this is now doing and will do in the future. None will have more influence in abolishing useless and hurtful therapeutical resources."

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* Abstract of paper read before the Ontario Medical Association, June, 1887.

Although lacerated cervix was described by Dr. Bennett forty years ago, its importance as a pathological factor was only recognized by Dr. Emmet in 1862, and with his usual ingenuity at once set about a means of operative cure. He first published an account of his operation in 1869, but it was not until 1874 that general attention was drawn to the subject.

The early recognition of this condition is often determined by the presence after the confinement of an elevated temperature, indications of slight septicæmia, the absence of milk, and a general impression that the patient is not doing well. These symptoms are due to cellulitis, which often occurs with a laceration of the cervix, without which it would otherwise have healed, but which causes obstruction of the circulation, and so arrests involution and the repair of the injury.

It would be well, therefore, when such a condition occurs after labor, to examine the case, not immediately after parturition, when the parts are so soft that the tear could not be recognized, but six or eight weeks afterwards, and then by appropriate means prevent a life of suffering.

Now, while on the one hand I believe some have laid more stress upon this condition than it deserves, and perhaps operated when it was not necessary, Emmet going so far as to say that "at least one-half of the ailments among those who have borne children are to be attributed to lacerations of the cervix," on the other hand there is little doubt that this condition is often overlooked by the general practitioner, or else it is mistaken for erosions of the os (so-called ulceration) or cancer, and either neglected or impropely treated.

Perhaps in this condition the safest course is the middle one, and the truth may be stated thus:—

1. A certain degree of laceration of the cervix is the rule in all first labors.

2. A certain number of these are entirely recovered from, or else they exist without producing any symptoms.

3. A certain proportion form important factors of disease.

It is this last class of cases, when correctly diagnosed, that alone require Emmet's operation, and in which relief of the symptoms may be expected.

The tendency, then, of laceration of the cervix is to heal unless either septic poisoning takes place or the tear extends beyond the crown of the cervix into the connective tissue, the accompanying cellulitis obstructs the circulation, interferes with involution, and prevents repair of the injury.

It is most commonly met with on the left side, probably because the vertex occupies usually the right oblique diameter.

When a laceration exists there is a tendency, especially on standing, for the tissues to roll out, while the obstructed circulation, the irritation of the vagina, and the resulting subinvolution increases the laceration, and as the vaginal outlet is usually patulous, owing, perhaps, to use of forceps or traction, or the accompaniment of a ruptured perineum, there is usually prolapse and retroversion.

The reticulated mucous membrane containing numerous Nabothian glands undergoes cystic hyperplasia and granular degeneration.

Then we have inability to walk or stand comfortably, backache, pains in the abdomen, irritability of the bladder, profuse menstruation, uterine leucorrhœa, headache, insomnia and other nervous derangements, or if pregnancy occurs, it often results in abortion.

If these symptoms which are so pronounced can be relieved by trachelorrhaphy, surely a great advance has been made by this discovery, for there is little doubt that if neglected they sometimes lead to cancer. In my own experience, every case which I have operated upon has been completely cured, and in two of them pregnancy followed, one of these having been delivered without a return of the laceration, nor followed by any of the previous symptoms. I mark out the intended incision with a scalpel, then remove the angle with Skeene's hawk-bill scissors, trim the edges with long-handled scissors, and use chromic catgut sutures. On the fourteenth day the parts are examined, when I nearly always find complete union.

PROSTATOTOMY.*

By A. Groves, M.D., Fergus, Ont.

Having lately practised this operation in a few cases of enlarged prostate, and finding the results in every way encouraging, I have thought it worth while to bring the subject before the profession, more especially as the operation is one rarely practised and the cases in which it is indicated are comparatively so numerous in men beyond middle life. To the practitioner with a patient who has enlarged prostate, requiring the use of the catheter several times daily, particularly when the passage of this instrument is painful and difficult, or when the bladder contains ropy mucus or pus, I can strongly recommend the operation; but even before this stage is reached, I am of opinion the operation is often indicated. The operation itself is similar to an ordinary median lithotomy, the patient being placed in the lithotomy position and a staff grooved on its convex surface passed into the bladder. The membranous portion of the urethra is opened as close to the prostate as possible, and a lithotomy knife is passed along the groove of the staff into the bladder. A tube is passed through the wound into the bladder, and, as Harrison advises, it is better to use an outer and an inner tube, the latter being of soft rubber is less irritating to the bladder than a rigid tube, and it can be cleaned and replaced without pain or worry to the patient. Little bleeding, as a rule, takes place, and after the first few days the patient sits up and goes about, the urine being caught in a rubber urinal, or in some cases a stop-cock may be attached which can be opened as occasion requires. Under this treatment the patient's condition rapidly improves. As a result of the perfect drainage the mucous membrane takes on healthy action, pus and glairy mucus disappear, and the more or less paralyzed bladder recovers its tone. The tube should be left in from one to three months. The results are not only permanent, but progressive, for the obstructing portion of the prostate having been incised, cicatricial tissue is formed, which by its contraction causes gradual diminution of that portion of the prostate which caused the trouble in the first place. It is difficult to lay down an exact rule as to when the operation should be undertaken, but long delay not only subjects the patient to a great deal of avoidable suffering, but also diminishes his chances of ultimate recovery, and at the same time tends to bring the operation into undeserved disrepute. It is, of course, unjustifiable to operate upon a dying man, but it is much more unjustifiable to defer an operation until hope has fled.

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* Abstract of paper read before the Ontario Medical Aseociation, June, 1887.

CASE OF ARSENICAL NEURITIS.*

By J. Ferguson, M.D., Toronto, Ont.

The patient had used liquor arsenicalis in twenty to thirty minim doses. She began to complain of severe pain in the legs ; the hyperæsthesia was very great on some parts of the feet and legs. She had diarrhœa, headache with giddiness, and the sight was weakened. The skin over the greater part of the body was covered with purpuraceous scales. On the brow and face the integument was brownish and mottled. The hyperæsthesia began to change into anæsthesia, and finally tactile sensation was almost lost. The perception of heat remained longer than mere touch. The reflexes, both tendinous and muscular, were greatly weakened. The responses to faradic and galvanic currents were very imperfect. The gait was not that of true ataxy ; it was rather a paretic one. The muscular sense of weight and resistance was markedly reduced. The voice became a mere whisper, due to paresis of the vocal cords. She had several attacks of pain in the stomach, with nausea and vomiting. She had a few attacks like girdle pains. The sudoriferous glands were thickened in some parts of the integument, and a proliferated epithelium in the lumen of the sweat ducts was abundant. The Pacinian corpuscles contained accumulations of epithelioid cells between the tunics. This caused pressure on the core. The central core of these corpuscles in many instances was homogeneous, having lost all trace of nuclei. The nerves of the integument in some parts showed changes similar to those met with around bed-sores. Many sections of the muscles yielded good specimens of degeneration, showing the muscle fibre was giving place to connective tissue. The sheaths of some of the larger nerves were reddened and thickened, while the nerve substance was softened. The myelin was often broken up and appeared in granular masses. In some places the nerves were infiltrated with leucocytes. In the cord some parts were found full of disorganized cells ; in other parts there was increase in the connective tissue. In the neuroglia there was a good deal of cellular and granular matter. It was concluded, from the clinical history and microscopic examination, that the patient had suffered from a multiple neuritis.

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* Abstract of paper read before the Ontario Medical Association, June, 1887.

PHOSPHATURIA.*

By H. Arnott, M.B., London, Ont.

Our knowledge of many portions of urinary pathology is in a very confused state. By the term phosphaturia, or the so-called phosphatic diathesis, many author's refer merely to a neutral or alkaline condition of urine in which the phosphates are precipitated. This may occur on being passed, or when a sample is heated in a test-tube, and has no other significance than depressed acidity. It is well known that if urine contains an excess of base or a deficiency of acid it will be alkaline, and the phosphates, under such circumstances being triple compounds, will be precipitated. Under such circumstances there may be a deficiency of phosphates rather than an excess, and, consequently, this phenomenon is indefinite and unreliable as a symptom.

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* Abstract of paper read before the Ontario Medical Association, June, 1887.

On the other hand, many of the later writers on the subject, by the term phosphaturia, mean any marked and continued deviation from the normal amount of phosphates excreted in the urine. This seems to me to be the definite and therefore proper basis for a study of the subject, and it is chiefly from this aspect that it will be found of service in differential diagnosis. The important point is the amount of phosphoric acid excreted, and this is approximately arrived at by estimating the total amount of phosphates. For this purpose a sample can be put in a long, graduated test-tube and saturated with the ordinary magnesia mixture or Liessier's fluid, and set aside for twenty-four hours, when the phosphates having settled to the bottom, the relative amount can be read off.

It seems to be settled that the total phosphates are increased in acute disease of the nerve centres and after any prolonged nervous excitement. They are diminished in chronic nervous disorders, excepting epilepsy, hysteria and chronic renal disorders. Beyond this all is contradiction and what looks like guess-work, which, it is hoped, time will clear up. In the differentiation of obscure nervous disorders this symptom will be found of very great value, and in many other diseases will also be found useful.

The cause of any notable excess of phosphates is always some nervous disturbance. If true, this is an important fact and worthy of careful study. At times it may seem to be due to indigestion, but in reality this will be found to be one of the symptoms of neurasthenia.

The treatment of any disease involving this symptom must include rest as the main feature. Many cases are œdematous from the deposit of phosphatic crystals in the urinary tubules. A lowering of the diet will increase the acidity of the urine and remove the difficulty. Medicines are useful only so far as they improve general nutrition or quiet nervous agitation.

THE RELATIONSHIP OF INSANITY TO MASTURBATION.*

By Stephen Lett, M.D.,
Medical Superintendent of the Homewood Retreat, Guelph, Ont.

In endeavoring to estimate and arrive at conclusions as to the relationship that exists between the unnatural gratification of the sexual appetite by masturbation and the psychological effects consequent thereon, we are met at the threshold of the enquiry by a lack of reliable data upon which to base opinions or demonstrate facts. The very secret nature of the vice prevents us from knowing by whom and to what extent it is practised. If we turn to hospital and asylum statistics, unreliable as they are in other matters pertaining to the causes of insanity, they are absolutely worthless in this particular. The admission papers filled out by the family physician do not, in a very large majority of cases, throw any light on the subject, and in the few instances where masturbation is set down as the cause of insanity, it is but a factor or single link in the long chain of combined causes which led up to, and finally culminated in, an attack of pronounced mental alienation, whilst in many cases it is not a cause, but the result of disease or irritation in the nerve centres.

Some people will no doubt contend that masturbation *per se* is quite sufficient to produce insanity, and many authors accurately describe a class of so-called "masturbational insanity"; but if all those who masturbated to excess became insane, it would be beyond the powers of any government to provide asylum accommodation for this class alone. It is chiefly those of a neurotic organization, with an insane diathesis (as some have aptly called it), who come under its baneful influence to such an alarming extent and with such disastrous results. In those thus predisposed to mental trouble, masturbation may be set down as an exciting cause of insanity.

Although, in the sense in which I have pointed out, masturbation may be an exciting cause of insanity, it would be a grave error to conclude that all insane persons who practise self-abuse have thus caused their mental estrangement. In many cases masturbation is but a symptom of mental disease. The intellectual part of our nature being disabled, the animal passions burst forth, and self-indulgence in all its unrestrained gratification reigns supreme. Irritation or disease in the cortical centre for the sexual appetite would produce similar results, as instances of masturbation being the consequence and not the cause ; witness the general paralytic, puerperal insanity, climacteric insanity, senile insanity, also certain traumatisms of the brain and spinal cord.

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* Abstract of paper read before the Ontario Medical Association, June, 1887.

Eckhard and others have shown that irritation of the medulla oblongata, the pons varolii, and the crura cerebri, cause vascular turgescence of the generative organs and priapism. This, however, may be solely due to the relaxation of the local blood-vessels in the sexual organs, which would be a natural consequence of irritation or injury in these centres. Whilst the centre for the sexual appetite is not definitely settled, it is pretty generally held by scientists of the present day that it is in close relation with the centres of emotion and the sense of smell. Thus Ferrier states: "From certain facts of experiment, we have reason to conclude that the centres of sexual feelings are probably localizable in the regions connecting the occipital lobes with the lower and inner part of the temporo-sphenoidal lobes ;" and he further adds, " As the reproductive organs in women form such a preponderant element in their bodily constitution, they must be more largely represented in their cerebral hemispheres, a fact which is in accordance with the greater emotional excitability in women and a relatively *larger development* of the posterior lobes of the brain."

Whilst a certain number of cases of masturbational insanity recover, a large proportion of them are incurable ; they are apt to lapse into a chronic condition, frequently degenerating into dementia.

In early life, the child who thus pollutes himself retards and arrests the healthy development of his nervous system, and the practise in such an one tends to idiotcy and imbecility rather than to insanity.

That masturbation is a most debasing, debilitating and depressing vice, which has a deleterious influence upon the physical, mental and moral nature is beyond controversy. It is equally true that its baneful effects are *cæteras paribus* in direct ratio to the early age at which it is practised, the extent to which it is carried on, and the nervous instability of its unfortunate victim.

Masturbation occurs in both sexes, and is equally harmful to the mental vigor of either. It is practised by the youth not yet in his teens, indulged in by the adolescent, and carried on by the octogenarian.

Masturbation, with an adequate predisposition, is an exciting cause of insanity. It is, perhaps, more frequently a symptom of that disease, but when present it hampers treatment, retards recovery, and in many instances precludes the possibility of a cure.

INJURIES RELATING TO THE ELBOW-JOINT.*

By J. P. Brown, M.D., L.R.C.P., Galt, Ont.

Among the most common and at the same time most troublesome afflictions to which young boys are prone are those relating to injuries of the elbow-joint. Curious, too, is the fact that fractures and dislocations in this region are almost exclusively confined to children of the male sex. In my own experience, while I have had a large number of boys suffering therefrom, yet I never had the misfortune or satisfaction, whatever way you like to make it, of seeing a girl suffering from the like injury. In speaking to my medical confrères on this matter, I have found that my own experience agrees pretty generally with theirs. This seems to be a curious circumstance, as our Canadian girls are almost as fond of out-door pastimes as are boys. Witness, as we may, our ice-ponds, skating-rinks and toboggan-slides in winter, and our croquet and tennis lawns in summer. I presume, however, that the girls, while fond of out-door exercise, display more prudence and general forethought in their amusements than the rough-and-tumble lads, who, in their harum-skarum fashion, lay the foundation for the future yeomen of our country.

At this early age fractures of the elbow are more common than

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* Abstract of paper read before the Ontario Medical Association, June, 1887.

dislocations. The difficulties of diagnosis are often very considerable. The injuries, which are often of a severe nature, produce so much general contusion with rapid swelling of the soft parts in the vicinity of the joint that it is often impossible to tell the exact nature of the injury. Sometimes the surgeon, summoned several hours after the accident, finds so much tenderness and swelling, that although he can discover deformity and produce soft crepitus between the segments of the severed cartilage, yet fails to discover with absolute certainty whether the head of the radius is *in situ* or not ; also whether one or both condyles have separated from each other or the shaft of the humerus. He is forced to take cases of this nature on general principles. And the question that has often presented itself forcibly to my mind, whether the treatment as recommended and laid down by our works on surgery is altogether to be relied on. For all the multitudinous injuries in the vicinity of the elbow, flexing the arm to the right angle and the application of angular splints, the arm being kept in a position midway between pronation and supination and supported by a sling, appears to be the *sine qua non.* Embron makes some exception in the case of the head of the radius being displaced forwards, when he recommends the straight splint padded and applied to the palm-surface of the arm. Even in this he leaves the matter open.

My own opinion is that our text-books are too lax in dealing with cases of this nature. We have general principles instead of fixed data to work upon, and the result has often been detrimental to the best interests of the sufferer. During the course of my lifetime I have often seen more surgery about a diseased arm, the result of permanent deformity, resulting from personal injury, which with timely and judicious treatment might have been avoided.

During early years the tissues about the elbow are exceedingly soft and yielding, the bony sutures themselves are only in a process of formation, the child is restless, nervous and excitable, and owing to the swelling at the seat of injury it is difficult to so bandage the arm while in a flexed position that the various segments constituting the joint may retain the position in which they were placed when the splints were applied.

Of late years I have pursued a different line of treatment. The chief difficulty in many of these cases is to ensure the position of the head of the radius. We are told that full extension will reduce a dislocated head, and if that is the case, then continued extension will incur continued reduction. And a week in that position would in a great measure restore the articular ligament to its original attachment. The ulna dislocated backwards, when reduced, would find no tendency to slip out of position upon full extension, save when the coronoid process was fractured, and even then the position would be a good one, as it would limit the action of the triceps muscle. In separation of the epiphysis, the straight position would be equally good for the latter reason, which, with anterior and posterior splints judiciously applied, would retain the fragments from slipping past each other. I think, from my own personal experience, as well as from reason, that these same injuries to the elbow-joint in juvenile life, in which, for the first dressing, the long, well-padded splints are infinitely preferable to the ordinary angular splint. If retained for one or two weeks, according to tho nature of the case, then the time will arrive for flexion and the application of angular splints to suit the character of injury with which we are called upon to deal.

I do not think I should conclude my short paper without briefly recounting my own experience in this matter for the past four years. Previous to this I had used the ordinary methods with varying result:—

Case I.—On May 9th, 1881, D. B., a boy aged 13, fell off a branch of a tree, a distance of ten feet, lighting on his elbow, producing a compound fracture of the olecranon process. The wound was ragged, oblique, and nearly two inches long. The olecranon was completely severed and retracted slightly by the triceps muscle. The forearm was flexed and the joint laid open. There was profuse hemorrhage. The clothing being removed, I flexed the arm still more so as to open the joint more fully, and douched it freely with slightly tepid water until hemorrhage ceased, thus cleansing the parts thoroughly from extraneous matter. The arm was then fully extended parallel with the body. This brought the segments of bone in almost juxtaposition. A long, well-padded splint was applied to part of arm from shoulder to wrist, the bandages so arranged as to draw down somewhat on the upper fragment. The elbow was left open for dressing. The wound was saturated with carbolic oil, one to eight, on lint. Oil silk protection and light bandages applied, and patient put to bed. The bowels were operated on by a laxative, and Dover's powder administered at night. Dressing was removed forty hours afterwards. Bones were separated about the eighth of an inch, the interstices being filled with blood and serum. No pus had formed. There was no great rise of temperature, and thermometer under tongue indicated 100.° From this time the dressing was repeated every day until the 19th. The wound was filling by granulation, the surface being bathed by a few drops of laudable pus. I saw the case once a day, and the temperature varied from 99° to 100°. After this date it abated. The dressing was changed every second or third day, and by the 10th January wound had completely healed. There was bony union, but the olecranon process seemed slightly elongated. From this time passive motion was commenced. At first very gently, efforts at flexion being increased as time advanced. Still the improvement was very slow. I did not see patient from Jan. 30 to July 25. The adhesions at the joint had become partly firm, for he could only bring the arm to an angle of about 140 degrees. On the 30th, Dr. Radford kindly administered chloroform and we broke up the adhesions by forcible flexion, bringing the arm to a little less than a right angle. We could not do more with safety. From that time passive motion was employed. The result was that the boy had a very useful arm, flexing to a right angle with full pronation and supination, but owing probably to the elongation of the olecranon he could never extend the arm fully after the forcible flexion under chloroform.

Case II.—On the 4th Jan., 1885, Mrs. R. S's little boy, aged 21 months, fell off a table. Owing to my absence from home I did not see him until the 7th. By this time the joint was very much swollen. The child was feverish and crying with pain. It was very difficult to tell the exact nature of the injury. Still there was crepitus, and I thought the head of the radius was thrown forward. The limb was extended fully and with coaptation pasteboard splints applied the full length of the arm. These were padded and kept in position by starch bandage. The child was placed on his side, and the arm extended on a pillow. All pain subsided. It was, however, difficult to keep the little fellow contented with his position for the ensuing week. At the end of that time I removed the splint. The swelling had subsided, and bringing the arm to the right angle, I put on a starch bandage for another fortnight. The child trotted about quite contentedly, and by that time had fully recovered.

Case III.—On August 10, 1885, Mr. C.'s son, a stout little fellow, aged about five years, fell some distance, injuring his elbow. I saw him in less than half an hour. There was fracture of the epiphysis of the humerus. This was marked very distinctly, the whole elbow projecting backwards, and being upwards on extension, slipped back again when the arm was liberated. The head of the radius was also thrown out. The boy had a full, soft, fleshy arm, and it seemed to me almost impossible to ensure the retention of the head of the radius, together with the fractured humerus, by means of the angular splint. Coaptation, together with extension, reduced the head of the radius as well as replacement of the fractured humerus; but it slipped forward again when extension ceased. I dressed the arm with long, stiff, well-padded pasteboard splints, keeping extension up till the starch bandage was applied, and binding with moderate tightness to keep the fractured humerus from slipping upwards. A few hours later I loosened the bandages somewhat by snipping the upper and lower ones for half an inch. There was no discoloration of the hand, and very little pain. The bandages were not removed for two weeks. When examined, the head of the radius was in position and the humerus had united at the epiphysis. The arm was bent to a right angle. An appropriate splint applied for another two weeks leaves the limb as useful as ever and without deformity.

Case IV.—On January 18, 1886, a medical friend sent for me in consultation. Mrs. G.'s son, aged about 10 years, had slipped on the ice on New-Year's Day, falling upon his elbow. There was a good deal of swelling about the joint when the doctor saw him, as well as deformity and some crepitation. He diagnosed separation of the epiphysis and displaced radius (forward). He reduced the arm and put on the angular splint. The patient apparently did well. On examining him, however, in his office that morning, he found the head of the radius dislocated forwards. The forearm could not be extended fully. We administered chloroform and then put on full extension. The head of the radius was pressed without much difficulty to its natural place; and one of us holding it in position, the other bent the forearm to an acute angle, thus effectually preventing the head of the radius from again slipping forward. The arm was bound in position and kept there for a week or two, resulting in perfect recovery.

Case V.—On Sept. 24, 1886, the son of Mr. H., aged nine, fell from a grocery waggon, lighting on his elbow and resulting in separation of the shaft of the humerus at the epiphysis. The radius was in situ. Believing, from my past experience, that the long splint was the best and safest for injuries to the elbow joint, I applied my ordinary pasteboard and starch bandage, thus insuring against displacement. After the first day or two the boy was allowed to walk about, hanging his arm by his side. In two weeks I dressed it again with the angular splint, and in due course the boy made a perfect recovery.

Case VI.—On Oct. 23, 1886, Mr. F.'s son, aged between nine and ten, was thrown from a waggon with great force, falling with all his weight upon his extended left hand. I found the arm pronated and flexed, and shortened fully two inches. The forearm was dislocated directly backwards. The olecranon process could be felt beneath the skin, while the projection of the condyles forward increased the antero-posterior diameter of the joint very materially.

Counteraction was performed by an assistant, but it took all the strength I had to reduce the dislocation over the knee, the coronoid process being locked in the trochlea of the humerus. Steady extension, however, had the desired effect, and in time it slipped into its place. The middle of the joint was not reduced, the internal condyle being moveable and very prominent. There was evidently separation of the internal condyle from the shaft. The radius apparently had not been displaced. Thinking that the fragment of the humerus could be kept in better position by full extension than flexion, I again applied the long splints. This time, however, only for a week. On removing the splints I found the whole arm in a state of ecchymosis from the internal hemorrhage produced by the severity of the injury. The olecranon and head of the radius was in position, but the internal condyle was as before, unusually prominent, though firm. The joint was half an inch wider than the one on the right arm. I put on the angular pasteboard splint. Patient wore it for several weeks, when passive motion was commenced. The arm is strong, but somewhat limited in motion. Pronation and supination are intact, and the hand can be brought to the mouth, but cannot be extended or flexed to full extent by several degrees. The projection of the internal condyle is sharp, and the breadth of joint before referred to still continues. Still the boy has a very useful arm, with prospect of still further improvement.

I trust my short paper has not proved wearisome. I cannot claim perfect accuracy in my views, but such as they are they are the result of experience; and if they serve as a medium of food for thought, if not for discussion, I shall be more than satisfied.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

CONDENSED REPORTS OF CASES IN DR. MACDONNELL'S WARDS.

CASE I.—AORTIC ANEURISM.

Aneurism has always been a common disease in the practice of the General Hospital, mainly by reason of the large number of old soldiers who have taken up their residence in the town. The case of Good, aged 54, a Crimean veteran, who left the hospital in April after a four months stay, is instructive, as illustrating the good effect of iodide of potassium in relieving symptoms and influencing the growth of the tumor.

On entry, the patient was suffering severely from cough and dyspnœa, and was unable to walk unaided from one part of the building to another. During sleep the respiration was markedly noisy. There was severe pain extending up the back of the neck. The physical signs pointed to the existence of an aneurism either of the arch or more probably of the origin of the innominate artery. At the time of his leaving all urgent symptoms had disappeared. He had gained weight, lost the cough, pain and dyspnœa, and on the day of his discharge was able to walk a distance of nearly a mile without any difficulty. The condition of the aneurismal tumor remained stationary. He had been taking all along ten grains of iodide of potassium three times a day, with full diet and no restriction as to his movements.

Very many other cases, showing the great good done by this mode of treatment have occurred lately, both in my own practice as well as in those of my colleagues. There was no history of syphilis in this case.

CASE. II.—MEDIASTINAL TUMOR (?).

A young butcher, aged 19, came into No. 11 Ward in March last, complaining of a swelling of the abdomen. He had been in good health up to within a few weeks of admission, when he noticed this very gradual enlargement. The feet were slightly œdematous, but had been much larger before entry. His habits had been temperate, and there were no previous illnesses whatever. When the patient is standing, there is nothing noticeable in his appearance beyond that the complexion is rather florid and the abdomen large and prominent. On lying a few moments on the back, the face becomes darker and cyanotic, and the ears particularly blue ; the pulse is rapid, generally over 100, small and irregular ; temperature normal. Suffers from headache occasionally, but does not feel at all ill. The chest is well formed and the pectoral muscles well developed. On the upper part of the left chest there are some enlarged veins, one larger than the rest, the size of a slate pencil, crosses the clavicle, the blood current in which is downwards. The heart's area of dulness is normal. The sounds are weak and irregular, but there is no murmur generally present, though occasionally a systolic basic murmur has been heard in the vicinity of the left second costal cartilage. Examination of the lungs yields a negative result. Has never suffered from cough or hæmoptysis. The digestive functions are properly performed ; never suffered from vomiting, hæmatemesis or melæna. The abdomen is uniformly enlarged and contains fluid, measuring 36 in circumference. Hepatic dulness measures 5½ from the fifth interspace. The liver margin is plainly felt, the surface uniform in outline and not painful to pressure. The urine contains lithates, but is otherwise normal.

During the four weeks that he was in hospital the condition remained in the main unchanged. The recumbent posture did not cause the same degree of lividity, and the ascites was not quite so prominent when he left.

This was a puzzling case, and the question arises, was the evident obstruction to the circulation due to cardiac causes or to the presence of a tumor? In favor of the cardiac view is the fact that the obstruction is general, affecting both the head and neck as well as the abdomen and extremities. Moreover, there is a probability that the obstructive symptoms have been present from childhood, or even from birth, for he tells us that the enlarged thoracic veins were always present. On close questioning he admits that the œdema of the feet preceded the ascites. The irregular action of the heart and the feeble pulse add to the likelihood of the obstruction being situated in the heart itself. The nature of the obstruction, if any, must become a matter of guess-work, so many cardiac anomalies being capable of producing symptoms and physical signs of a similar kind to those observed. The fact of the occurrence of cyanosis on lying down would point rather to the presence of a tumor, which in that posture rolled upon the heart or great vessels. The patient left hospital with his case not diagnosed.

CASE III.—EFFECTS OF ASPIRATION IN CIRRHOSIS OF THE LIVER.

R. B., aged 55, a baker, was admitted into hospital March 8th, 1877. He was a large, stout man, and had always enjoyed good health until about a year or a year and a half ago, when he began to suffer from flatulence, uncomfortable sensations after food, with a constantly present sense of lassitude and wearinesss. The bowels had been irregular, and there has been an habitual condition of constipation, alternating with attacks of diarrhœa. Five months before admission he had a severe attack of erysipelas, during which jaundice and œdema of the feet were present. Nine months before admission he had been told that his face was getting yellow. Recovery from this illness was but partial, the acute symptoms subsided, but he still remained in an indifferent condition of health. During the first week of March he again began to become jaundiced, and was attacked with violent hæmatemesis, which was present from time to time for thirty-six hours, and on account of which he was brought to the hospital. He has never had hæmorrhoids, nor has he been aware of the passage of any blood per rectum.

Patient has for many years past been in the habit of taking stimulants, gin and beer, very freely.

State on admission.—Conjunctiva and whole surface of the body deeply jaundiced. Venous stigmata on side of nose. The abdomen moderately distended (40 inches) from fluid in the peritoneum, and the superficial abdominal veins are unusually distinct. Considerable œdema of legs. The abdomen is nowhere tender. The liver is uniformly large and smooth, and measures nine inches in right mammary line. There was considerable exhaustion from loss of blood, and the hæmatemesis continued at intervals for a day and a half after admission, ceasing under the influence of rest.

For several days dark-colored blood was passed by the rectum and the bowels acted very frequently. The urine contained a large amount of bile, but no albumen ; as far as could be ascertained, the total quantity passed did not exceed twenty ounces. None of the other organs of the body were enlarged. At the bases of both lungs there were fine, moist râles, but no dulness on percussion.

After a few weeks residence in hospital the jaundice almost disappeared, but the ascites increased, and the feet, legs and scrotum soon became very œdematous, the last attaining the size of a cocoanut. The total quantity of urine passed per day was very small, averaging but about twenty ounces. Aspiration of the belly to the small extent of 46 ounces was practised. On the following day the tension of the skin of the legs was much relieved, the scrotum resumed its ordinary size, and the quantity of the urine increased to 40 ounces. During the following week the size of the abdomen became much less, the legs much more reduced in size. The diuretic mixture (Infus. Digitalis with Acetate of Potash) seemed to become active, and 50 to 60 ozs. of urine were passed daily. Finally the general condition of the patient improved to such an extent that he left the hospital and now reports himself every week. There is still a moderate degree of ascites and the feet are still swollen, but the patient can attend to his business and walk some distance to the hospital for advice.

CASE IV.—GRAVES' DISEASE.

Within the last three months two cases of this somewhat rare disease have found their way to our medical wards. At the latter end of Dr. Ross' term of duty and at the beginning of mine a man aged 27, a plumber, was admitted with cough, headache and gastric disturbances, pain in stomach, and vomiting. It was noticed that the eyes were lustrous and projecting. The thyroid was enlarged moderately. Has been obliged lately to wear a No. 16 collar instead of a No. 14½, as formerly. The heart is enlarged, the apex beat extends one and a half inches beyond the nipple line. At the apex there is a systolic murmur which is transmitted to the mid-axillary line; a second murmur is heard at the aortic cartilage, systolic, short and rough. Pulse 112 to 120, soft and compressible. Græfe's eye symptom is present. The man remained in hospital some three months, without any very marked change in his condition.

The second case is that of a woman aged 28, who has been married eight years and is the subject of constitutional syphilis, there being a history of a primary sore, followed by sore throat, falling off of the hair, and periosteal inflammation of the tibia. Besides superficial scars which are found upon the legs, she has a large liver, with albuminuria and enlarged spleen. The exophthalmos is not very prominent, but a stranger entering the ward could not fail to notice her staring expression. The lids are retracted, and Græfe's symptom is present to a small extent. Thyroid enlargement is slight, but the pulse is continuously frequent; I have never found it less than 100, and it is usually at 116. There are no special heart complications. Digestion is much disturbed, diarrhœa frequent, and pain about the abdomen complained of. The intense anæmia present may account for the occurrence of Graves' disease.

Reviews and Notices of Books.

The Science and Art of Obstetrics.—By THEOPHILUS PARVIN, M.D., Professor of Obstetrics and Diseases of Women in Jefferson Medical College. Philadelphia: Lea Brothers & Co.

This scholarly and readable book, the work of an able and accomplished teacher, is in many respects a welcome addition to American obstetrical literature. As Lusk's Midwifery is largely an epitome of German views and methods, Parvin's book shews similarly the influence of the French school. While, as a rule, the teaching is sound, it is somewhat conservative in tone and frequently less decided and outspoken than might have been expected from a man of such ripe experience. A stronger infusion of the personal element would enhance the value of the book. The chapters on Rupture of the Uterus and Puerperal Fever are somewhat disappointing, but those on Pelvic Deformity and Obstetric Operations, especially the forceps operation, are particularly good. On the whole, the work is a creditable production, and in subsequent editions the author will no doubt make such changes as will bring it fully up to the high standard expected of him.

A Manual of Obstetrics.—Ay A. F. A. King, A.M., M.D. Third edition. Philadelphia: Lea Brothers & Co.

Dr. King's manual, originally prepared for his students in the Columbian University and the University of Vermont, has now reached its third edition. It is probably the best of the small obstetric manuals, and is popular among students. In judicious hands it may be of some value, but as a general rule the use of such manuals as text-books cannot be too severely condemned. The average student is apt to fancy that everything worth knowing in obstetrics has been "boiled down" into three or four hundred pages; he accordingly sets to work to cram down the condensed mass, hoping to digest it at his leisure. As he rarely manages to assimilate it, superficiality of attainment and crudeness of thought are the inevitable result.

Drug Eruptions: A Clinical Study of the Irritant Effects of Drugs upon the Skin.—By Prince A. Morrow, A.M., M.D., Clinical Professor of Venereal Diseases; Consulting Surgeon to the Bellevue Out-door Department, &c. With one lithographed plate. New York: William Wood & Co.

The untoward effects of drugs is a subject which has received but scant attention until recently. It is, however, a subject that will well repay the practitioner's earnest study. How frequently we are compelled to give up the appropriate treatment of a case owing to the appearance of some untoward effect? Among the most frequent and annoying of these effects are those that result either from the direct or remote irritation of the skin. It frequently happens that our most valuable agents, when ordered in pressing cases, are attended by such disagreeable effects on the skin that their discontinuance becomes a necessity. As instances, we might mention the intolerable itching that at times attends the administration of morphine ; the disfiguring acne that so commonly results from the use of bromides and iodides ; the painful and distressing dermatitis that sets in both from the local and remote effects of mercurial preparations. By judicious administration these effects can often be prevented. Dr. Morrow has rendered an important service in collecting from the mass of literature what is known on this subject. His work must have been one of great labor. He has, however, performed it well.

Practical Pathology.—By JOHN LINSAY STEPHEN, M.D., Assistant Physician to the Western Infirmary. Glasgow: MacMillan & Co. Toronto: Williamson & Co.

This little book, like sundry other little books recently published on the same subject, shews a decided tendency to give undue prominence to the description of microscopical methods and appliances at the expense of equally important coarser changes and methods, which are very briefly disposed of. Otherwise it is an excellent small handbook, the style is easy, yet clear and concise, and the author evidently a thoroughly practical man. It has no illustrations ; the descriptions being intended to be read while actually studying specimens of the diseases to which they refer.

Handbook of Practical Medicine.—By DR. HERMANN EICHHORST, Professor of Special Pathology and Therapeutics and Director of the University Medical Clinic in Zurich. Vol. II—Diseases of the Digestive, Urinary and Sexual Apparatus. Vol. IV—Diseases of the Blood and Nutrition and Infectious Diseases. New York: Wm. Wood & Co.

This work, which has been issued in several numbers of Wood's library of standard authors, furnishes an admirable exposition of practical medicine as taught in Germany. Its author is one of the well-known teachers and writers of that country. It is necessarily much condensed, but it is surprising what an amount of ground has been gone over, expressing the author's views on most of the important points concerned in the subject treated of. The present numbers contain especially interesting chapters upon tuberculosis, syphilis, rickets, blood disorders, and the diseases of the stomach, with the modern methods of their diagnosis and treatment. Many illustrations are introduced, a large proportion of which are taken from original observations.

Bright's Disease and Allied Affections of the Kidneys.—By CHARLES W. PURDY, M.D., Queen's University, Professor of Genito-Urinary and Renal Diseases in the Chicago Polyclinic, etc. With eighteen illustrations. Philadelphia: Lea Brothers & Co.

This volume contains a systematic, practical and concise description of the pathology and treatment of Bright's disease and the affections of the kidney allied to it and sometimes included under the same term. The writer has evidently made prolonged observations upon these diseases, and furnishes very clearly the results he has arrived at. Although, as we should expect, these are mainly corroborative of the accepted doctrines, yet on many points it will be found that the author will not blindly follow high authority, but thinks and argues for himself. The classification adopted is a very simple one, and yet includes practically all the essential divisions of the subject. Having cleared the road by introductory chapters upon albuminuria and uræmia, thus avoiding much subsequent repetition, the following are treated of in separate chapters: Acute and Chronic Nephritis, Scarlatinal and Puerperal Nephritis, Cirrhosis, Lardaceous Degeneration, and Cyanotic Induration. On the subject of uræmia, much importance is claimed for persistent observation of the average daily amount of urine, the contention being that a greater or less degree of oliguria always prevails when uræmia is being induced, apparent exception to this rule being otherwise explained. In regard to the treatment of uræmia, the usual eliminative system is followed, but the special directions given appear to us very sensible and well-founded. No mention is made, in acute uræmia, of the employment of morphia subcutaneously, except for the arrest of actually-present convulsions. We have long been of opinion that this drug (or chloral) is most valuable when administered as a prophylactic in that stage of headache and active vomiting which so commonly precedes convulsions by some hours. The very important subjects of scarlatinal and puerperal nephritis receive all the prominence which is their due, and are ably treated. The book is a good guide to a general understanding of the phases of Bright's disease, and will serve well the practitioner who comes to it for assistance in the management and treatment of those formidable and common diseases.

Society Proceedings.

ONTARIO MEDICAL ASSOCIATION.

The seventh annual meeting of the Ontario Medical Association was held in Toronto, on June 8th and 9th, under the Presidency of Dr. Richardson of Toronto.

The forenoon of the first day was occupied with routine business.

The first business of the afternoon session was the President's Address. Dr. Richardson dealt for the most part with the recent advances in bacteriological investigations, especially dealing with the labors of Pasteur and Koch.

The first paper read was by Dr. Fenwick of Kingston, on *Lacerations of the Cervix Uteri*, an abstract of which appears on page 712.

Dr. Groves of Fergus then read a paper on *Prostatotomy*, (see page 715).

Dr. Ferguson of Toronto gave an account of a case of neuritis, supposed to be due to the medicinal administration of Fowler's solution of arsenic.

Dr. Arnott opened the discussion on medicine by reading a paper on *Phosphaturia*, for an abstract of which the reader is referred to page 717.

Drs. Bruce Smith of Seaforth, McDonell of Orillia, and Thorburn of Toronto, followed in the discussion of this subject.

Dr. George Henry Fox of New York read a much appreciated paper on *The Surgical Treatment of certain Skin Diseases.* This was illustrated by cases and large photographs. He discussed the use of the lancet in indurated acne and hypertrophic rosacea, the use of the electrolytic needle in destroying various forms of naevus and in removing superfluous hairs, and the use of the scarifying knife in lupus and of the curette in epithelioma.

He presented two interesting cases from Dr. Graham, of Toronto practice, which were only amenable to treatment by surgical procedure. One was an extensive naevus of the cheek and eyelid, the deeply pigmented skin being covered with hair and numerous warty excrescences. The other was a lupus of the cheek, on which Dr. Fox had operated the same day at the Toronto hospital, by the method of linear scarification, the knife used being of kidney shape, and peculiarly adapted to this purpose.

Dr. S. S. Murray (Thorndale) related a case of *Laceration of the Femoral Artery.* On Feb. 18, 1885, J. Mc. was gored by a bull (a short-horn); the upper wound was eight or nine inches long, extending into the femur at its deepest part and an inch and a half outside the femoral artery. The tip of the horn must have passed between the artery and anterior crural nerve, tearing open the sheath and stretching and lacerating the femoral artery; the femoral vein was not injured. There was no hemorrhage from the main artery, but just at the lower edge of Poupart's ligament there was a spot on the artery about a quarter of an inch in size, like a hard, black scab. Below the apex of Scarpa's triangle the horn had passed through the thigh nearly parallel with the upper wound, and the tissues between these wounds sloughed away. The artery could easily be lifted up with the finger. The upper wound was above the profunda; the pus at one time burrowed up under Poupart's ligament. The usual antiseptic treatment was followed, and the wound healed by granulation; the blue line gradually crept down until the artery was covered. Of late the patient at times complained of a sensation of numbness and as if the place had torn open again, after sitting a length of time.

DR. GERSTER, of New York, read a paper on *The Antiseptic principle as applied to the treatment of the primary induration and the initial sore of syphilis.* An animated discussion followed, in which Drs. Porter of New York, Canniff, Teskey and McFarlane of Toronto, took part. We hope to be able to present our readers with an abstract of this paper in our next number.

DR. HOLMES (Chatham) read a paper on *Puerperal Fever.* After referring to the various generally recognized causes, he read reports of six cases which were shown to have been due to the presence of damp, stagnant air in the lying-in room. The cases were all marked by frequent, irregular chills and fever, and in all respects resembled cases of true puerperal septicæmia. The six women were confined in houses having no sewer connections, but having the space between the ground and the sills boarded up tightly so that there was little or no circulation of air beneath the houses. The land on which the houses were built was level, low and undrained, and the soil under them was found moist even in dry weather. Four of the cases occurred in the same block, three in adjacent houses, within a year, and two of the four proved fatal in spite of every effort of the writer and of other physicians who saw them. Antiseptic intra-uterine injections faithfully tried did no good, but, on the other hand, were so frequently followed immediately by chills that some of the patients became afraid of their use. All measures proving unavailing in the last two cases, Dr. Holmes had them removed to houses with good sanitary arrangements, when immediate improvement began and went on to complete recovery. The convalescence was so prompt and unchecked in the cases removed as to leave no doubt that it was due entirely to the change of air.

DR. PACKARD of Philadelphia read a very elaborate paper on *Our views of the Surgeons of the Past Century.*

DR. YEOMANS narrated the following case of *Acute Intestinal Obstruction* :—The patient, a strong, healthy farmer, engaged in active, physical labor and exposed to wet, cold weather for some days, was suddenly taken sick with a violent chill and symptoms of enteritis. I saw him on the 22nd of April last, and noted the following symptoms: Pulse 98; temperature 100°; severe pain in the umbilical region; no tympanitis; a "sausage-shaped" tumor extending from the right iliac fossa upwards to the right hypochondrium; extreme tenderness on the right side, especially about the cæcum. Enemata of castor oil and soap-suds brought away no fæces.

April 25.—Pain, tenderness and high temperature still continued; somewhat relieved with powders of opium, bismuth, etc., and hypodermic injections of atropia and morphia. An enema of olive oil, injected through a long rectal tube, was administered, with no beneficial effect. The hips were elevated and about two pints of warm water injected through the rectal tube. This large quantity was retained for a few minutes and then came away without any appearance of fæces.

April 26.—Pain, tenderness and tympanitis had all increased. Patient was becoming exhausted; hands and arms cold; pulse rapid and small. Following the suggestion of Dr. Ashurst, as contained in his chapter of "International Encyclopædia of Surgery," I tried venesection, taking from the arm one and a half pints of blood. About noon next day a spontaneous, free evacuation of the bowels occurred, with evident relief and mitigation of the symptoms. The patient complained of no discomfort from the loss of blood. Hardened fæces, which had apparently been impacted in the bowels, continued to come away for two or three days, at intervals of a few hours.

May 1.—The tympanitis which had commenced in the right iliac region now extended across the abdomen to the left side, causing shortness and difficulty of breathing.

May 4.—Tympanitis and distressed breathing increased. Upon careful examination and palpation there appeared to be a circumscribed accumulation of pus immediately over the cæcum. I introduced the aspirating needle and drew off about four ounces of pus, with some bubbles of gas having a fæcal odor. This seemed to relieve the distressing pain and tympanitis. Convalescence was followed by complete recovery.

SECOND DAY.

DR. LETT of Guelph read a paper on *The Relations of Masturbation to Insanity*, an abstract of which appears on page 719.

Drs. Roseburgh, Oldwright, Powell and McDonell joined in the discussion which followed the reading of this paper.

The discussion on Surgery was opened by Dr. Strange, of Toronto, who dealt with the surgical treatment of whitlow, erysipelas and carbuncle. Drs. Gerster of New York, Richardson and Ferguson of Toronto, took part in the discussion.

At the conclusion of this discussion, the Hon. G. W. Ross, Provincial Minister of Education, entered the room, and was invited by the President to a seat on the platform.

DR. J. E. GRAHAM of Toronto read a very carefully prepared report of a fatal case of *Herpes Zoster* that lately came under his observation. Full details were given of the changes found in the affected nerve areas.

During the afternoon session, Drs. Porter and Satterthwaite of New York read papers; the former *On the Etiology and Pathology of increased body heat, in relation to disease, and the use of antipyretics;* and the latter on the so-called *Uric Acid Diathesis*. We hope in our next number to be able to give abstracts of these two valuable papers.

Removal of the Uterine Appendages.—DR. ADAM WRIGHT treated this subject in three aspects: 1. Operation for the relief of nervous diseases. He thought that generally it was unjustifiable; but exceptional cases might occur where life or reason became endangered, when such interference might be considered advisable after careful deliberation and consultation. 2. Operation for bleeding uterine fibroids. He thought it the best and safest procedure when dangerous hemorrhages could not be controlled by medicines. In the great majority of such cases it stopped the hemorrhages and frequently reduced the size of the tumors. 3. Operation for diseased conditions of the appendages, including, especially, hydro-salpinx, pyo-salpinx and hæmato-salpinx. He advised the operation when a persistent attempt to relieve the symptoms, according to methods such as those advised by Emmet, had failed.

Dr. Powell (Ottawa) read a short paper on *Pelvic Hæmatocele of the Extra-Peritoneal variety*, often termed *Hæmatoma*, recording an unusual case which recently came under his observation following immediately upon delivery at full term, and making some observations upon it. Dr. Powell could not quite believe his case unique, as similar ones in most respects have undoubtedly been recorded, but his researches failed to discover one with similar details, especially as regards its interesting, rare and fortunate termination.

March 2, 1887—Was hastily summoned to Mrs. P. in labor, aged 25, healthy; fourth pregnancy. First normal and terminated at full term in September 1884; next two pregnancies ended in abortion. Enjoyed good health throughout gestation. Labor began about noon and terminated by a strong expulsive effort unexpectedly. It was precipitate, and child was born before Dr. P. arrived; no bleeding. Uterus contracted, and after delivering placenta, which was quite normal, Dr. P. left the house, leaving her comfortable in all respects; bowels had moved in the morning, and she had passed water. She began to suffer great pain within an hour, and a morphine powder was sent to her. At 5 P.M. Dr. P. was summoned. The morphine had not relieved her. She seemed to be suffering acutely—face blanched, features pinched, and appearance suggested a shock rather than an anæmia. Pain complained of entirely in lower rectal region and a desire to strain. Bandage had been unpinned, belly was prominent, and uterus could be felt high up over pubes. On vaginal examination, the whole pelvis was felt filled with a firm, tense, resisting, elastic tumor, which flattened vagina forwards against pubes. Os uteri could not be felt. Per rectum, same tumor felt, but rectum was flattened forwards and to one side, not on to sacrum. A hæmatocele was diagnosed, and the hemorrhage had no doubt been checked by the pelvic tissues and viscera, as is usual. A hypodermic of morphia and atropia was given in coccygeal region, which gave complete relief to the pain.

March 3—Seen in consultation with Dr. McDougall, and later on with Dr. H. P. Wright. They agreed with diagnosis, and to await events was decided upon; meanwhile pain was to be relieved by hypodermics morning and night. Local condition just the same ; lochia natural. She was catheterized night and morning and a guarded prognosis given.

March 5—Patient said she felt relief early in the morning, and was not in nearly so much pain. On examination, to our surprise it was found that the blood had forced its way down by the rectum to the perineal fascia, and so on, spreading itself between the layers of cellular tissue under the skin of the inside of left thigh and over the buttock to near the hip joint, and no doubt between the layers of glutei muscles, as the left buttock felt full and boggy. Per vaginam, the remains of the hæmatoma could still be felt, but soft and yielding. From this time forwards she made a good recovery, and was up in about a fortnight, the remains of the blood tumor gradually absorbing ; and when examined by Dr. Powell on May 2nd, no trace of the former mischief could be felt, and she was about her ordinary household duties.

Dr. Powell concluded his paper with some general remarks about the condition known as hæmatocele, and discussed it as bearing on his own case, quoting leading writers and observers.

A spirited discussion followed by the members, Dr. Moore of Brockville quoting a similar case occurring in his own practice, in which he aspirated through the vagina, emptying the tumor, and the patient recovered completely. Dr. Powell replied to the various speakers, and took issue with Dr. Moore on his treatment on the ground that unless there were some special indications for interference such collections should be let alone, and he thought it especially hazardous to operate immediately following a labor.

DR. MCDONAGH of Toronto read a paper on *Tuberculosis of the Larynx*, dealing with the subject chiefly in its relation to pulmonary phthisis from a diagnostic point of view. After a reference to the frequency of laryngeal tuberculosis, shewing that it existed in fully 33 per cent. of phthisical patients, the history of a case in practice was related, in which there had been hoarseness and ulceration of the vocal cords for nine months before any disease could be detected in the lungs by physical examination. The purulent matter from the ulcerated surfaces was removed by passing a dry brush into the larynx, and on examining the same with the microscope tubercle bacilli were found in abundance. Other cases of the same nature were referred to. It was contended that these cases afforded fair proof of the possible existence of primary laryngeal tuberculosis, but in order to advance positive evidence, the report of an autopsy made in the Toronto General Hospital was given, in which case tuberculous deposits were found in the larynx and not in the lung. The writer expressed the opinion that a case of phthisis may often be diagnosed by the laryngoscope earlier than by the stethoscope, and urged an examination of the larynx in all suspicious cases, and that, if necessary, a microscopical examination be made of the secretions.

The session was closed by an interesting discussion on Ophthalmology, which was opened by Dr Roseburgh of Toronto, and shared in by Drs. Ryerson, Palmer, Burnham, Reeve and others.

TORONTO MEDICAL SOCIETY.

Stated Meeting, May 19, 1887.

THE PRESIDENT, DR. NEVITT, IN THE CHAIR.

Adjourned discussion on Dr. Powell's paper.—DR. OLDRIGHT, in the course of the discussion, presented a patient on whom he had performed paracentesis thoracis in 1871. The syphon was inserted each day and the chest cavity washed out antiseptically until a cure was effected. The patient is now in good health, the expansion on the affected side being perfect. He regards syphon drainage as most effective, since if the free end of the tube be kept under water the bellows action of the chest is maintained.

DR. MCPHEDRAN congratulated Dr. Powell on the excellent results in all his cases. His method of drainage is ingenious, but there is probably nothing to be gained by it. If the suppurating cavity can be well drained a free opening is preferable, and to obtain such, a portion of a rib should, if necessary, be removed. The entrance of air under such circumstances can do no harm, and washing out of the cavity will not be required. He thought the cases were few in which much could be effected from aspiration, unless under exceptional circumstances it would seem advisable to resort to free drainage at once, not only as the most certain means of effecting a cure, but also on account of the importance of relieving the lung from compression, and thus prevent, as far as possible, its being bound down by adhesions. The parabolic curve of the upper margin of the area of dulness that obtains in many cases of moderate effusion is doubtless due to the elasticity of the lung, as explained by Broadbent, Ellis and others. As the fluid is effused the lung contracts by virtue of its own elasticity, as it does when the chest is opened to the admission of air. This contraction is greatest upward, inwards and backwards, and thus tends to leave most space between the lung and chest wall in the axillary region, and in this the fluid collects chiefly. With this limited amount of effusion there is no compression of the lung, only a contraction of it, due to its own elasticity. This disposition of the fluid would indicate that the lower parts of the axillary region should be selected for making drainage ; if the patient were confined to bed, the opening should be made back near the apex of the scapula, as the fluid would gravitate backwards more or less. In cases of old thoracic fistula, exsection of the ribs (Estlander's operation) should be resorted to. It had been done lately with very good results by Drs. Park of Buffalo and Gerster of New York. It has been successfully resorted to in some cases of pyopneumothorax, and offers the only ground of hope in this disease.

DR. ATHERTON said—In looking over my notes on cases of empyema, I find that I have treated since 1874 eight patients suffering from this disease. Their ages, taken in regular order, were 24, 19, 40, 21, 10, 8, 2 years and 11 months, and 16. Out of these the one aged 40 died, about ten weeks after operating on the chest, from an atack of purulent diarrhœa, set up by eating a lot of green things contrary to my strict orders. The empyema in her case followed a few days after the opening of a pelvic abscess ; and previous to her indulgence she had very much improved in her general condition, being able to get down stairs for the first time subsequent to the attack of pelvic inflammation. The side was still discharging somewhat at the time of seizure with bowel trouble, and she succumbed after twelve days of diarrhœa, which was uninfluenced by any treatment. My first and fourth cases were still living at last accounts, with fistulous openings in side, it being more than ten years since I operated on them. Both of them had symptoms of pleuritic effusion lasting more than a year before coming under my care. One of them I tapped five times in the course of two years, the intervals between the tappings being, on two occasions, as long as nine months, and the increase of weight was as much as 15 lbs. Finally, however, after the last tapping symptoms of severe inflammation arose, and I was forced to make a permanent opening. My other five remaining cases all fully recovered in from six weeks to three months after opening the chest. The last one of them was a boy aged 16, who had about ten weeks before got a bit of nutshell in right bronchus, where it set up ulceration and suppuration of right pleural cavity. The piece of shell was expectorated eleven days before the chest was opened, but he continued to spit up most horribly offensive pus, and at the time of operation he seemed nearly moribund, there being general anasarca, and his respiration being fifty per minute. About two quarts of fœtid matter were removed, and I was informed that in a few weeks he was able to be out and at light field work. As to prognosis in cases of empyema, there can be no doubt the two chief factors to be taken into account are the age of the patient and the length of time during which the chest has been distended previous to operation. If the pleural cavity has been full of fluid for a year or more, and the patient is eighteen years of age or upwards, the best results attainable, without a resort to Estlander's operation, is recovery with a permanent fistula. Even patients younger than the above would likely be a long time subject to some discharge. In younger persons, however, where the disease has been going on less than six months, my experience would lead me to expect a perfect recovery in from six weeks to three or four months. In only the first one of my cases did I wash out the chest cavity; and as I found this procedure was somewhat annoying in the patient's weak state I omitted it after the first week, and have never resorted to it since. I consider that the free ingress and egress of a volatile antiseptic as applied on the dressing produces much the same effect as the use of antiseptic washings. Besides, the latter are known more than once to have been attended by sudden death; and they are now, I think, very generally condemned during the first few weeks of treatment. When, however, fistulæ remains for a long time they are permissible with a view of drying up any small cavity which may be left. During a recent discussion upon the subject of empyema in the London Medico-Chirurgical Society, a large proportion of the speakers expressed themselves as opposed to washing out the pleural cavity after operation, and none of those present spoke in its favor. I am strongly of the opinion that all of these cases should be treated with the strictest Listerian precaution, including the spray.

Dr. Machell related several successful cases of pleurotomy for empyema.

In closing the discussion, Dr. Powell urged the more frequent use of the hypodermic syringe for diagnostic puncture in cases of doubt as to the presence of fluid in the chest. It is by the very early detection of empyema that we are placed in a position to treat it most successfully. No hard and fast rules for operating can be laid down. The indications are clear, and that method is best which most fully meets them. Free incision, with drainage into antiseptic absorbents, will most frequently be called for.

Acute Recurring Endocarditis.—Dr. W. H. B. Aikins presented a *Heart* with greatly dilated right auricle, hypertrophied left ventricle, and a considerable stenosis of the aortic orifice due to thickening, partial calcification, and adhesions of the aortic valves with one another. There were numerous small, recently-formed vegetations on the free margins of the valves and one or two spots of erosion. Years ago the patient had organic heart trouble, with intermissions of tolerable good health. When seen for last illness she was suffering from a facial erysipelas, the temperature not rising higher than 103°; as the fever was subsiding the cardiac symptoms became marked and distressing, with, for a short time, pain in and swelling of the left arm. The action of the heart was irregular, apex beat diffused and displaced outwards, an aortic systolic murmur was distinctly heard. It was supposed that the erysipelas caused a general sepsis, which resulted in the *materies morbi* being deposited on the valves and giving rise to a fresh endocardial infection, although, on examining the valves for micro-organisms, the *streptococcus erysipelatis* was not observed.

Cystic Tumor.—DR. R. B. NEVITT then showed a tumor removed from the upper and inner aspect of the thigh of a man aged 40. The tumor had appeared as a hard, round, moveable nodule, and had gradually assumed its present dimensions—about six inches in length and the same in circumference—containing three or four cysts. The lower portions were ulcerated and sloughing, and an inflammatory zone surround the lower third of the tumor. Thirty minims of a four per cent. solution of cocaine were injected in the line of the proposed incision and the tumor removed. The blood supply was large, one vessel the size of the internal pudic requiring ligature, and two other smaller being twisted. The pedicle peeled clearly from the connective tissue of the sheath of the adductor. There were several other tumors on the body—one on the opposite side, one on the same thigh, one on the back, and one on the face.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, March 11*th*, 1887.

DR. WILKINS, 1ST VICE-PRESIDENT, IN THE CHAIR.

DR. GEO. H. FOX of New York, DR. PHELPS of Chateauguay, and DR. JACKSON of Brockville were present at the meeting.

Common Errors in the Treatment of Skin Diseases.—DR. FOX read a paper on the common errors in the treatment of skin diseases. He said that the great error made by practitioners in treating skin diseases was failure to treat the patient; the disease is treated, not the patient. It is most important that the patient have fresh air, wholesome food—in short, everything that tends to improve the general health. Special treatment of the disease is of no avail without improving the condition of the patient. He regarded attention to the diet as most important, and said there should be a radical change both in the quantity and quality of the food; a strict course of diet should be given the patient; the majority of patients improve on starvation diet.

He advised his patients to increase the quantity of fluids taken and decrease the solids; to eat less and exercise more. A change of diet almost invariably proves of value, the more radical the better; he gets the best therapeutical effects from a vegetable diet in the treatment of inflammatory skin affections. A meat diet congests the skin; a vegetable diet relieves the congestion. He is in the habit of restricting the meat in winter and forbidding it in summer. In giving directions to a patient it is better to tell them what to eat than what to avoid. Water should be taken sparingly at meals, but in quantity between meals. In speaking of local applications, he said that very few are needed. If the disease be acute, soothing applications should be given; if chronic, stimulating ones. Infantile eczema is, as a rule, too much stimulated, and chronic eczema with infiltration too little stimulated. In treating psoriasis, chrysophanic acid is the best remedy, but even this agent should not be used in every case, as it does positive injury where there are congestion and inflammation, but later, when the eruption becomes dry, it does good. In acne a tonic treatment is best. In speaking of local applications, the reader of the paper stated that when the substance is needed to be absorbed by the skin, then the animal fats should be used; when mere protection is wanted, then vegetable fats do very well. Vaseline has but little power of penetrating the skin. He then went on to speak of arsenic, which, he said, is used too much by the general practitioner in the treatment of skin diseases, and which, as regards skin diseases, would not be missed if abolished from the pharmacopœia; he now rarely uses it. It is at best a much over-rated remedy, and its indiscriminate use in skin diseases is fraught with evil.

Discussion.—DR. SHEPHERD said he was not prepared to go the length Dr. Fox did in attributing such a vast influence to diet in the treatment of skin diseases. No doubt it is often of importance, but he thought that Dr. Fox, like many others, was riding his special hobby too hard. Did not think that individuals among the poorer classes with eczematous diathesis or when the disease was due to their occupation could be cured by dieting. No doubt people eat too much, and this is especially true in the higher ranks of society. In such patients diet is of the utmost importance. In this country people eat too much meat, and he is in the habit of limiting it to one meal a day. In regard to local applications, he was thoroughly in accord with Dr. Fox. Most physicians in inflammatory diseases stimulate too much. It is a common thing for physicians to prescribe zinc ointment in every case, and give no directions about the use of soap and water. He found many skins in the acute stage of eczema unable to bear ointments at all, and to be much relieved by mild lead lotions. He also agreed partially with Dr. Fox concerning the misuse of arsenic ; it, like zinc ointment, is prescribed in routine practice by many practitioners. Though of little value in eczema, he thought he had given it with good effect in psoriasis and bullous eruptions. He had no hesitation, however, in stating that it was a most valuable tonic, and he would be sorry to do without it.

Dr. Howard said that the paper presented but few novelties in the present state of the science of medicine. Skin diseases are but local manifestations of a general condition, and it is but natural that the most successful treatment would be an alterative one, aimed at the cause of the unhealthy condition of the skin. He was not prepared, however, to hear that so much attention is given to diet, but it seems only rational. Chronic diseases generally require dietetic treatment, so one should not be surprised to find it efficient in chronic forms of skin diseases. Formerly arsenic was given for all forms of skin disease. He agreed with the last speaker in thinking that arsenic was valuable as a tonic, and he had obtained good results from its use in psoriasis and bullous affections.

Dr. Hingston said that for the last ten or fifteen years he had practically abandoned local treatment in skin affections and used only constitutional, and had always regarded a carefully regulated diet of the first importance. He could not agree with Dr. Fox in what he said about a meat diet. The French Canadians are great meat eaters, yet they were remarkably free from skin affections. Some, however, visit the United States, work in factories, and live in boarding-houses where the diet is largely composed of hot biscuits, doughnuts, pies and pastry, and live in small rooms ; then come back with skin diseases which cannot be due to a meat diet. The speaker attributed most of the skin affections he had met with to want of fresh air and use of highly-spiced and other forms of irritating food, while not a few cases could be traced to the excessive use of green tea. Bread and meat he considered a good diet in skin diseases; he also believed in taking large quantities of water between meals.

Dr. Phelps said that as a general practitioner in the country he could endorse every word Dr. Fox had said. He believed most thoroughly in a complete change of diet in skin affections. He had even found a change from a good diet to an apparently bad one beneficial. He mentioned some severe cases of infantile eczema which were completely cured by changing the diet from fresh cow's milk to condensed milk. Acne in females is very generally caused by uterine disease, and until this is cured the acne cannot be relieved.

Dr. Lapthorn Smith said he had long held that all skin diseases not parasitic or specific were due to errors in diet. He had little faith in local treatment, but considered that it is most important to attend to the condition of the stomach. He thought that the good old mixture of rhubarb and soda is too much neglected in the treatment of skin diseases.

Dr. Mills believed Dr. Fox's paper to be of great importance to the medical public. He regarded Dr. Fox as a type of a specialist, who, though a specialist, treats his patients from a broad knowledge of general medicine and dietetics. To this in no small degree he believed Dr. Fox's successful career to be due.

Dr. Wilkins asked if Dr. Fox believed in an exclusive milk diet in eczema; also if in penitentiaries, where the diet was regulated, was there less skin disease. He also asked if in Germany, where little meat is eaten, there is a less amount of skin disease.

Dr. Fox, in reply, stated that he did not so much object to meat as an article of diet as to its excessive use. He had found the most obstinate cases of eczema yield to a complete change of diet that was only temporary. With regard to milk diet in eczema, he formerly believed in it, but found many patients could not take it. He had tried it on himself, and found he was unable to stand it for more than a few days. The excessive amount of skin disease in Germany could be accounted for by the habitual use of cabbage and beer as articles of diet. He found beer very injurious in inflammatory skin affections, much more so, indeed, than whiskey. Rhubarb and soda he regarded of great use, but are prescribed too much in a routine manner in dispensaries and hospitals. One must always treat each particular case, remembering that what is suitable treatment in one case may be positively injurious in another patient with the same disease.

Dr. Howard, in proposing a vote of thanks to Dr. Fox, referred to the great privilege the Society had enjoyed in so being brought in contact with a man of such extensive experience. In Dr. Fox's paper there was nothing new, and in saying this he paid him the highest possible compliment, for the whole tendency of his paper was to illustrate the great scientific truth that in medicine we cannot treat the disease. We must treat the individual, the constitution. He was struck by the effect of change of diet, as shown by the numerous examples quoted by the previous speakers in breaking up the sequence ol disease ; one speaker even advising the use of peaches as an article of diet.

Dr. Hingston seconded the motion. In the course of a few happy remarks he referred to the effect that the present fishery dispute might have in lessening the supply of a wholesome article of food in the American market.

It was then moved by Dr. Trenholme, seconded by Dr. Lapthorn Smith, that Dr. Fox be made an honorary member of the Society. This was carried unanimously.

BRITISH COLUMBIA MEDICAL COUNCIL.

A meeting of the British Columbia Medical Council was held in Victoria, B.C., on Tuesday and Wednesday, the 7th and 8th of June. There were present—Dr. Trew (New Westminster), President ; Dr. Milne (Victoria), Registrar ; Drs. Harrington (Victoria), Powell (Victoria), McGuigan (Vancouver), Davie (Victoria), and Tunstall (Kamloops).

It was decided that hereafter the meetings of the Council should be held semi-annually, and alternately at Victoria and on the mainland. The meetings on the mainland will be held alternately at New Westminster and Vancouver.

It was also decided to have printed the proceedings of the Council from the time of its incorporation, together with the British Columbia Medical Act and amendments thereto.

After examination, the following gentlemen were admitted upon the register: Dr. J. A. Duncan (Comox), Dr. Ebberts (Wellington Mines), and Dr. A. M. Robertson (Vancouver), while Dr. Farrar (Kamloops) was registered without examination on a British diploma.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

An Anomaly of the Cord.—On the evening of April 22nd, 1887, I was called to attend Mrs. S. S. in her sixth confinement. The labor was in all respects normal, child healthy and well developed. On delivering the placenta I found a condition of things I think sufficiently rare to warrant publication. The placenta was normal in size and general appearance, attached at the fundus uteri, and rather easily expelled. The umbilical cord was normal in appearance, twenty-six inches in length, and bifurcated. The bifurcation, in two distinct branches, began fourteen inches above the insertion of the navel, one branch being inserted at the right side of the placenta and the other at the left, with no intermediate ramifications to the placental structure. On close examination we found the umbilical vessels at the bifurcation very nicely branched, each "limb" of the cord containing its vein and accompanying arteries. The mode of formation of such an anomaly is readily comprehended when we remember that all modifications of the cord "depend on the way in which the allantois contracts its adhesions with the point of the ovum in contact with the womb. The placenta is always developed somewhere on the interior surface of the uterus, "and if the allantois happens to strike the chorion at a point somewhat removed from that which is in apposition with the internal uterine surface, the umbilical vessels must evidently have a tendency towards the latter, just as the roots of a plant always stretch towards the spot which will afford them the most nourishment." Cases similar to the one reported above, although somewhat rare, have been recorded, and several obstetric authors have made a quite extensive study of the subject. Benckiser, in his thesis delivered before the French Academy, gave a very learned view of numerous cases of this anomaly that had been brought to his notice. M. Jules Colquet of Brussels has also written extensively on this subject.—*Dr. Wessinger in Medical Age.*

The Cause of Urethral Fever,—Mr. Reginald Harrison contributes a short paper on this subject to the July issue of the Liverpool *Medico-Chirurgical Journal*, in which he takes the ground that almost all cases of fever occurring after internal urethrotomy are due to poisoning from alkaloidal substances contained in the urine. His attention was first called to the urine as a possible cause when studying his notes of operations upon the urethra. He was struck, he says, by the fact that neither rigors nor fever showed themselves until after micturition had been naturally practised, or there was evidence that urine had found its way into the wounded urethra and was lodging there. This view was afterwards strengthened by the results of Bouchard's studies concerning the toxic elements of normal urine. This observer found that the urine contains a certain amount of the alkaloids formed in the intestines (ptomaines), which are absorbed by the intestinal mucous membrane and excreted by the kidneys. To the objection urged against this theory that rigors and pyrexia are not produced when extensive subcutaneous extravasations of urine occur, Mr. Harrison replies that the conditions are very different in the two cases. A mixture of blood and urine, such as is found after internal urethrotomy, he thinks, is capable of producing very different compounds from those that extravasated urine alone is likely to yield. Again, when urine is extravasated into the tissue, its action is that of a virulent local poison, under the influence of which the contiguous tissues are killed outright, probably before they can exercise any power of absorption. Another objection which might be raised is, that cases have proved rapidly fatal from urinary fever where there was no evidence that the urethra had sustained any appreciable lesion. The writer believes, however, that any statement that the urethra is free from injury should be received with caution. Though the operator is not conscious of having inflicted a lesion on the urinary passage with an instrument which he has been using, nor the patient show evidence of it immediately, this by no means implies that a structural lesion on the urethra has not been inflicted. As a rule, he says, it is not the most difficult cases of catheterism which are most liable to urinary fever. In those in which structural damage is inflicted, or false passages made, the injury is usually on the distal side of the stricture, and consequently well protected from urine infiltration or contact. In such cases the amount of shock must be greater than that caused by the slight wound of a urethrotomy knife, which, Mr. Harrison asserts, is almost invariably followed by rigors and fever.

That there are other forms of pyrexia, such as the so-called irritative and the malarial, following occasionally the mere passage of a catheter or a sound, the author does not deny ; but these have nothing in common with the severe urinary fever which is usually referred to nerve-shock, but which the author regards as caused by the absorption of poisonous matters contained in the urine.

The practical point of these views is the bearing which they have upon the prophylaxis of urinary fever. This can be prevented, Mr. Harrison maintains, by providing for free drainage of the bladder and removal of the urine as rapidly as it is excreted. This drainage is to be secured by means of a perineal section performed simultaneously with the internal urethrotomy. The author says that he has never seen rigors and fever after combined internal and external urethrotomy, so long as the bladder drainage of urine through the external perineal wound was free and uninterrupted. Fresh urine flowing freely over the glazed surface of a wound is innocuous, but when it is pent up, as in a urethral wound, it is apt to be speedily converted into a most destructive and poisonous agent. It is not improbable that Mr. Harrison's views of the causation of urethral fever are in the main correct; but the necessity of resorting in every instance to a perineal section is not so evident. The author's experience as to the frequency of this complication is certainly not that of most surgeons. He met with it so constantly that he was even led to practically abandon the operation of internal urethrotomy for a number of years, and resumed it only when he adopted the method of combined internal and external operation.—*N. Y. Med. Record.*

CANADA

Medical and Surgical Journal.

MONTREAL, JULY, 1887.

THE DEGENERATION OF NERVES AFTER SECTION.

In a paper by Dr. Shepherd in the January number of this JOURNAL, the results of secondary suture of nerves in several cases are reported. The subject is both instructive and suggestive. In one case the operation was attended with partial success after the lapse of nine years since the original division. Dr. Shepherd himself united the ulnar nerve in a case that presented itself in the Montreal General Hospital ten weeks after its division by an axe cut. The day after the operation there was "tingling feeling in the little and ring fingers and general and tactile sensibility was good." In 1884 Dr. Roddick sutured the sciatic nerve seventeen months after division. "The immediate result of the operation was the healing of two troublesome ulcers on the foot."

The above results, indicating an almost immediate restoration of the functional activity of nerves, the ends of which had been long sundered, are not easy of explanation. They seem inconsistent with the Wallerian law of degeneration. New and much-needed light has very recently been thrown on this subject. Dr. Prause, at a meeting of the Berlin Physiological Society, reported the results of his examinations in the human subject after operation, and in animals after experimental section of nerves. In a case of amputation just below the knee for gangrene of the foot, the nerve had degenerated, it was found, up to, if not beyond, the point of amputation; but some normal fibres were found. In the case of experimental section of nerves in animals, when both sensory and mixed nerves had been divided, it was found that in the peripheral part, while the majority of the fibres degenerated, a considerable number did not. The same applies to the central end of the nerve ; but the relative number of each kind is in inverse proportion to that in which they are found in the peripheral part. It therefore appears that one set of fibres degenerates towards the periphery and the other towards the centre. The assumption seems to Dr. Prause justifiable that those fibres which degenerate towards the periphery have their trophic centre in the spinal cord or brain, while those which degenerate centripetally have their trophic centre in the periphery, perhaps in the tactile corpuscles of Meissner.

At all events, while there is much still to learn on this subject, the results of the surgical cases referred to above, and of similar ones, find a much readier physiological explanation in the light of Prause's facts. It appears that there is not such complete degeneration of all the fibres of the nerve as was once supposed. Dr. Roddick's case illustrates the great influence of nerves over nutrition, and lends a certain degree of support to the doctrine of the existence of separate trophic fibres. A microscopic examination of some of these nerves after union following secondary suture might prove very valuable, if it could be secured.

COUNTRY RESORTS.

The opinion commonly prevails in the mind of the laity that the country is the place for health, and that a residence amidst the green fields or by the river-side for two months in the year will go far to increase the general health of the family and restore the bodily and mental wear and tear induced by the long winter —and truly it will. But, like many of the good things of this world, care and caution must be exercised in indulgence in it. Pater and mater-familias, before they decide upon a country-house, must bear in mind that other considerations are necessary in selection beyond the prettiness of the scenery, the boating advantages, or the time of starting of the trains. Most medical practitioners have found that when their patients return from these annual migrations many bring unpleasant reminiscences of their journeying in the shape of fevers and sore throats, and often the town doctor has to visit outlying villages to find his child-patients stricken with one of the preventable diseases.

Our object is to point out to parents the wisdom of devoting their attention to the sanitary condition of our watering-places. Many of these villages are filled to repletion by an annual influx of thousands of new comers. Drainage does not exist in any of them. Water is drawn from that prolific source of disease, the shallow well, which drains a surface on which the universally prevalent privy pit is situated, and which in so many instances has been found to provide a water highly charged with organic matters. Privies in the country are notoriously dirty. In many of our country places dirty farm-yard, undrained stables and offensive cattle-shed are found to exist. The intending visitor should take the precaution to see that in addition to pure air, pure water is supplied to the family. The character of the milk supply should be looked into. Scarlet fever has been shown to come directly from the unhealthy cow, and greater care should therefore be taken in seeing that the dairy department is conducted upon true hygienic principles. The village to which the townsman and his family are going may itself contain cases of zymotic disease. We all know that diphtheria is rife in country parts, and typhoid disguised under various names is never entirely absent. A judicious exhibition of care in selection would not only benefit the townsman, but would exert a most salutary influence in enlivening the energies of the village folk, teaching them the wholesome lesson that an unsanitary state of their municipality and the existence of preventable disease will tend to diminish the revenue from summer visitors. Considerations such as these might with propriety be suggested to the heads of families by their confidential medical advisers, and if carried out would tend to prevent much of the unhappiness and misery which falls to the lot of the medical man to witness.

FUNERALS.

That we must all die cannot be denied; it is a necessity of our fallen nature, and we shall never be able to avoid it, but can avoid making our death a cause of danger to others. The mode in vogue of conducting funerals in this city we must heartily denounce, as being not only in many cases a source of unnecessarily cruel expense to the afflicted family, but a most prolific cause of disease and death to those whom custom compels to join the melancholy procession to the grave.

There is an old superstition of Highland origin—indeed we believe it is mentioned in one of Sir Walter Scott's novels—to the effect that he who falls at a funeral will be the next to die. Now such a superstition is doubtless founded on fact, the man who falls being probably the weak man of the party, the one on whom the fatigue of the walking tells most. In Montreal it has been a matter of observation to us that after the death of an elderly and highly respectable citizen one or more of his contemporaries soon follow, and in many instances this is the effect of attendance at the funeral of the first. When an old man dies, the majority of those who follow the hearse are his old friends, and likely therefore to be of or about the same age—the pall-bearers certainly are. There is hurried preparation on their part to get to the house of the deceased, and clothing often quite unsuitable to the surroundings is donned. In summer the attendant exposes himself to the burning sun in his black, hot Sunday clothes and heavy tall hat, and in winter he can scarcely be too warmly dressed. In wet weather he will most certainly be damp from one end of the ceremony to the other. A fatiguing half-hour is commonly spent in standing about, in or near the afflicted house. If he stand inside, he breathes air vitiated by the presence of the corpse and the exhalations of often some hundred of his fellow-mourners. Standing outside is no less dangerous. A man of advanced years, with fatty heart or thickened arteries, is then compelled to take a long walk in muddy or slushy roads, perhaps in winter exposed to a very low temperature and to traverse a space longer than he has travelled over for years. The pace is slow, the surrounding circumstances of a depressing kind, and there is risk of chilling in winter and of sunstroke in summer. Churches, when used for burial services, are commonly most ineffectually heated. We have been in some where no attempt whatever was made to raise the frigid air to a comfortable temperature. The church service is often very long, but long as it is, an end comes, and then the dangerous march is resumed. Those who drive to the cemetery incur fresh dangers. The way is long, the wind is cold, and, as we remarked, the mourner may be both infirm and old. The danger of chilling is again incurred on the homeward drive, and fortunate is Senex if he escapes entirely from the ordeal that custom has imposed upon him.

Cremation, as a general practice, is a long way off, and such a reform, desirable as it is, is not likely to be attained in our generation. We therefore advocate a modification of existing fashions, and venture to hope that before long this tedious and mischievous pomp and ceremony will be dispensed with, and that the weary may be laid at rest attended by a few loving friends and not by the long train of acquaintances we see at the present time, drearily trudging along our streets.

ARREST OF LABOR BY GASTRO-INTESTINAL FLATUS, NECESSITATING THE APPLICATION OF FORCEPS.

Prof. Bouchacourt of Lyons reports a rare and interesting case of accidental dystocia in the *Nouvelles Archives d' Obstetrique et de Gynécologie* (May 25th, 1887). The patient, a young woman of 23, married fourteen months, after once aborting came to her full time about 20th December, 1886. About the age of puberty she had suffered from dyspepsia and chloroanæmia, but was in good health at the time of her marriage. During the course of her pregnancy she was troubled with nausea, vomiting, and a tendency to flatulence, which yielded readily to appropriate treatment. Labor began in the morning, the liquor amnii drained away about 9 A.M., and the head was found to be presenting in the first position of the vertex. About 5.30 P.M. slight vomiting occurred as the head cleared the cervix. The pains being very strong, the head well flexed came down rapidly upon the perineum and began to distend the vulva. All at once the pains ceased, the patient had neither the will nor the power to press down, and felt as if the child had receded into the upper part of her abdomen. At the same time the abdomen suddenly distended with such a loud noise as to alarm those around the bed. She lay as if dead, and the fœtal heart sounds became rapid and feeble. Forceps were applied without delay, and a living female child delivered. In a short time she began to rouse up, and for nearly an hour kept noisily expelling from mouth and anus a quantity of intestinal gas. Convalescence was normal, except that about the fourth day as lactation began, the dyspeptic symptoms with flatulent distension returned. She ceased nursing and the symptoms disappeared. The urine examined a few days before confinement was free from albumen, but contained a little sugar, which had disappeared by the twelfth day when a second examination was made.

Prof. Bonchacourt considers the case unique, and is unable to find or to give a satisfactory explanation of the phenomena. He read the case before the Lyons Medical Society, and in the discussion which followed several explanations were suggested. The rapid diminution of abdominal pressure as the head suddenly cleared the cervix, hysteria, the effect of the previous chloro-anæmia, and a sort of flatulent idiosycrasy were variously suggested; while others thought a more probable cause to be the mechanical action of the head in compressing the rectum and preventing the exit of intestinal gas. The author is inclined to think that the mechanical element was only one factor in the case since the dyspeptic symptoms recurred when nursing began and disappeared when it was discontinued.

SIR JAMES ALEXANDER GRANT.

It is with great pleasure we record the fact that Dr. J. A. Grant, Ottawa, has been created Knight Commander of the Most Distinguished Order of St. Michael and St. George. This is the first instance of a Canadian physician being honored with the title of K.C.M.G. Dr. Grant was born in Inverness-shire, Scotland, on the 11th of August, 1830. He received his arts education in Queen's College, Kingston, and graduated in Medicine in McGill University, in 1854. He is a member of the Royal College of Physicians, London, and Fellow of the

Royal College of Surgeons, Edinburgh. Shortly after graduating he started to practice his profession in Ottawa, and in a very short time his energy and ability placed him in a distinguished position. He has been a physician to Lord Monck, Lord Lisgar, Lord Dufferin, Lord Lorne, and is now physician to their Excellencies of Lansdowne.

The distinguished subject of this notice has occupied, at various times, all the responsible and important positions that is in the power of the profession in Canada to confer on one of their own number. He is an ex-President of the Canadian Medical Association, and of the College of Physicians and Surgeons of Ontario. At the meeting of the British Medical Association last year, in Brighton, he had the great honour conferred on him of being made an honorary member of this great body. That Dr. Grant has been an earnest and devoted student of his profession, the following contributions from his pen, at various times during the past few years, abundantly testifies :—

1. Punctured wound, anterior lobe of Brain, 1856.—*Med. Chronicle, Montreal.*
2. Compound comminuted of Femur and Ligature Femoral Artery, 1857.—*Medical Chronicle, Montreal.*
3. Punctural wound of Pleura; Pleuritic effusion; Iodine injection.
4. Carcinoma Medullare, 1859.—*Medical Chronicle, Montreal.*
5. Notes of cases of poisoning, 1859.—*Medical Chronicle,* "
6. Twins with single Placenta, 1859.—*Medical Chronicle,* "

(*British Medical Journal.*)

7. Notes of Surgical cases, 1860.
8. Unique Anchylosis of knee joint, forward at a right angle, 1861.
9. Tetanus and Poisoning by Strychnine contrasted, 1861.
10. Obstruction of the bowels, appendix concretion, 1861.
11. Notes of Surgical cases, 1862.
12. Treatment of Rheumatism by Boletus Laricis Canadensis, 1862.
13. Notes of obstetrical cases, 1862.

(*Canada Medical Journal, Montreal.*)

14. Puerperal Mania, 1865.
15. Protracted uterine gestation, 1865.

(*Medical Times and Gazette, London.*)

16. Treatment of Skin Diseases, 1863.
17. Disease termed "Black Leg," as observed amongst Ottawa Lumbermen, 1864.
18. Excision of the Knee Joint, 1865.

19. Retrospect of the year 1876.—*Canada Lancet.*
20. Addresses delivered before the Bathurst and Rideau Medical Association, 1876, 1877, 1878 and 1879.—*Canada Lancet.*
21. Dermoid Cyst of the Ovary, 1879.—*Medical and Surgical Journal, Montreal.*
22. Cancer of the Breast, in its relation to Paget's Disease of the Breast, 1882.—*Medical and Surgical Journal, Montreal.*
23. Urethral Stricture and Perineal Section.—*Canada Medical and Surgical Journal*, 1886.
24. Aneurism of the Thoracic Aorta.—*Canada Medical and Surgical Journal*, 1885.
25. Address on Medicine. Medico-chirurgical Society, Ottawa, 1885. *Canada Lancet.*
26. Uterine Fibrous Polypus.—*Canada Lancet*, 1881.
27. Aphasia or Alalia.—*Canada Lancet*, 1881.
28. Gymnastics of the Brain.—Canadian Medical Association and *Lancet*, 1880.
29. Epidemic Zymotic Diseases of Animals and how they are communicated to man.—*Canada Lancet*, 1885.

CANADIAN MEDICAL ASSOCIATION.

The twentieth annual meeting of the Canadian Medical Association will be held in the city of Hamilton, on Wednesday, the 31st August, and Thursday, September 1st. The following discussions will be held :—

1. On " Empyema," by Dr. McPhedran of Toronto.

2. Dr. Grasett of Toronto will open a discussion on some surgical subject.

3. " Subinvolution of the Uterus," by Dr. Eccles of London.

4. " The present state of Cardiac Therapeutics," by Dr. Jas. Stewart of Montreal.

The following are the officers of the Association for the present year :—

President—T. K. Holmes, M.D., Chatham.
President elect—J. E. Graham, M.D., Toronto.
General Secretary—James Stewart, M.D., Montreal.
Treasurer—Charles Sheard, M.D., Toronto.

ONTARIO MEDICAL ASSOCIATION.

The seventh annual meeting of the Ontario Medical Association proved one of the most successful gatherings ever held by this body. The attendance was good and the attention keen.

The president, Dr. Richardson of Toronto, occupied his position with credit. We think he was unfortunate in the choice of a subject for his address. Modern bacteriology is not a subject that can be handled easily, even by an expert, to the satisfaction of a general professional audience. One of the most noticeable features of the meeting was the presence of a number of prominent American physicians and surgeons. Their contributions contributed not a little to the scientific success of the meeting.

A UNIQUE WORK ON CANADIAN TOPICS.

Mr. Erastus Wiman, President of the Canadian Club, writes as follows :—

" It is the intention of certain members of the Canadian Club, in New York, to issue, in the form of a beautiful book, the papers which have been delivered before the Club during the past winter by prominent parties, together with those which are to be delivered during the remainder of the season.

" These papers will include a speech on ' Commercial Union,' by the Hon. Benjamin Butterwork, member of Congress, who is said to be one of the most eloquent men of that body. A remarkable production by Prof. Goldwin Smith on ' The Schism in the Anglo-Saxon Race.' A paper by Dr. Grant of the Queen's University on ' Canada First.' One by J. W. Bengough, editor of Toronto *Grip*. By Mr. LeMoine of Quebec, on ' The Heroines of New France.' By J. A. Fraser, ' An Artist's Experience in the Canadian Rockies.' By Edmund Collins, on ' The Future of Canada.' By Professor G. D. Roberts, of King's College. By George Stewart, jr., of Quebec. By the Rev. Dr. Eccleston, on ' The Canadian North-West.' By John McDougall, on ' The Minerals of Canada.' And by the editor, G. M. Fairchild, jr., on ' The History of the Canadian Club.' The work will also include extracts from the speeches and letters of the President.

" The book is to be issued in beautiful style, at $1 per copy.

" A great many Canadians will doubtless desire to possess themselves of this rare compilation, and, by purchasing copies, indicate the interest which is manifested throughout Canada in the attempt of the Canadian Club to lay before Americans the resources, advantages and attractions of their native country.

" Parties desirous of obtaining copies can do so by enclosing the price of the book to JAMES Ross, Canadian Club, 12 East 29th Street, New York."

NOTES AND COMMENTS.

Is there a true heart-strain ? Early on the morning of the 11th ult., I was sent for to see Mr. A., aged 51, an active business man, not obese, but an unusually gross eater. He had always been healthy and in December had placed very large additional insurances on his life. On Monday, the 6th, he was very constipated and had strained violently at stool for over half an hour. His son, a physician, said he was livid and much exhausted after the effort. From this time he presented the following symptoms : Shortness of breath, feeble circulation, cardiac pain, sleeplessness and gastro-intestinal disturbance. On Friday night his physicians noticed Cheyne-Stokes breathing and he was extremely restless. At 7 A.M. when I saw him he was rational ; pulse 140, extremely small ; hands mottled. After 25, 30 or 40 seconds of rapid and increasing breathing, there followed 25, 30 or 35 seconds of absolute cessation, during which the heart would droop and the pulse become smaller. The heart sounds were extremely feeble and rapid, no murmur, no gallop-rhythm. At aortic cartilage a rat-tat-tat of clear, sharp sounds like the fœtal heart. Dulness not much increased. At 11 A.M., still conscious ; Cheyne-Stokes rhythm persists. Apex beat more punctuate at, and a little outside, the nipple. Sounds sharp and clear. The hypodermics of ether and strychnia, with counter-irritation, seemed to have temporarily strengthened the action. The urine was scanty and careful examination showed slight amount of albumen and a few tube casts. In the evening mental condition not so good ; wanders. Has no pain, complains of no distress and *looks* remarkably well for a man in his critical state. No change in heart symptoms. Cheyne-Stokes breathing persists. He died in the night.

As an autopsy was not allowed, we have no knowledge of the exact anatomical condition, but I think this may be regarded as an instance of 'over-strain' on a heart, the seat of secondary changes in a latent Bright's disease. The prolonged efforts at stool, doubtless caused an acute dilatation, with strain of the heart muscle, and the development of a condition of cardiac insufficiency with imperfect and ineffective contractions leading finally to asystole and death. Leyden has recently written upon this subject, and an abstract of his views will be found in our Reports on Progress, in the *American Journal of Medical Sciences* for Oct. 1886.

The term *spurious*, used now in connection with traumatic aneurism, has also been applied to those instances of dilatation and pulsation of larger vessels which not infrequently simulate aneurism so closely that the greatest caution must be exercised to avoid error. The words ' mimic' and ' phantom' define even better, and with less confusion, the same condition. It is met with particularly in the abdominal aorta, and it is not too much to say that for one true aneurism of this vessel there are twenty or more instances of mimic dilatation. In neurotic, hysterical women, the condition is extremely common, and in anæmic, debilitated states, the throbbing may be so extreme, that when a murmur co-exists it is really difficult to decide. In the absence of a positive, *expansile* tumor, which can be grasped, the diagnosis of abdominal aneurism is always doubtful. In the March number I reported a series of cases of duodenal ulcer, one of which (case IX) illustrated this point. There were pulsations even strong enough to shake the bed, a well-marked bruit, and severe pains—but no aneurism. Dr. Samuel West has written on the mimic subclavian aneurisms in Vol. XVI of St. Bartholomew's Hospital Reports. It is less common in the innominate artery. Some months ago a young girl, aged 21 or 22, was sent to my clinic with signs of aortic insufficiency and dilatation and hypertrophy of the heart. The pulsation in the carotid vessels was very strong and above the sterno-clavicular articulation the dilated innominate could be distinctly seen, and felt as a tumor which did not entirely disappear during diastole. There was dulness beneath the articulation and the manubrium, extending also a little to the right. Evidently there was dilatation of the vessel, but was it truly aneurismal? The existence of aortic insufficiency, in which we have such remarkable systolic dilatation of the aorta and its branches, and the debilitated condition of the patient induced one to give a negative opinion. Some time after I saw a report of the case in a medical journal as one of aneurism; then heard that it had been made the subject of a clinical lecture on aneurism. About six weeks ago I saw the patient again, as it was suspected that an abdominal aneurism had developed, but the existence of the most intense pulsation was not convincing. Finally, by the kindness of her physicians I saw the *post-mortem*. Enormous hypertrophy and dilatation of the heart, extreme curling and insufficiency of the aortic valve; aorta with innominate and other branches absolutely normal—no dilatation, no atheroma. Abdominal aorta also of natural size. The case is instructive as showing the extent to which dilatation may reach without any lesion of the arterial coats. That there was actually increase in volume of the arch and the innominate cannot be doubted. Bramwell, in his work on the Heart, gives an instance of dynamic pulsation of the aortic arch, simulating aneurism.

Dr. F. C. Shattuck has called attention (*Boston Medical and Surgical Journal*, April 28th, 1887) to the value of leeching in conditions of over-distension of the right ventricle, and reports six cases, of which three were materially benefited. A dozen leeches are applied over the liver and the bleeding kept up by means of poultices. When there are objections to venesection, this plan has great value, but, as with bleeding, it may not be used early enough or blood may not be drawn in sufficient quantities. In a case of pneumonia recently, with commencing cyanosis, the leeching did not seem to have any influence, and I regretted—too late—that free bleeding had not been employed.

The choice of a hypnotic in the insomnia of heart disease is often a source of worry to the practitioner. I have been using urethran and paraldehyde in a number of cases, the latter with marked relief. The urethran seems so variable; sometimes 2 or 3 grains will prove effective, at others 20 or 30 grains are required. In appropriate cases and when the proper dose is reached, it acts promptly. In two instances in which Hoffman's anodyne—with which I always begin—had failed, paraldehyde in ʒi doses gave quiet sleep and relieved entirely, during several nights, the distressing paroxysms of dyspnœa. It has an advantage in stimulating the heart's action and increasing the urine.

If statistics prove anything, we should turn without delay to hydrotherapy in the treatment of typhoid fever. Brand of Stettin, the original Brand, who in 1861 revived the Currie method of treating fevers, has presented in eight or ten numbers of the *Deutsche Med. Wochenschrift* an overwhelming array of figures in support of his method. He claims that severe cases are converted into mild ones; that the temperature is kept at or near the normal; complications are prevented, and the morbid processes are suppressed. A bath at 15°R. for fifteen minutes is given every third hour, so long as the fever is above 39°C.; not solely against the fever, but to control the general morbid processes. No other treatment is employed. He claims that when begun early and properly carried out the mortality is 0. per cent., and in general and hospital practice the death rate should not exceed from three to five per cent. He has analysed over 19,000 cases with a mortality of only 7.8 per cent., certainly a much lower percentage than can be shown by any other method. It is not a little curious, however, that in Germany, where Brand's method is best known and has been most thoroughly tried, the treatment has been abandoned at many of the larger clinics and seriously modified at others. For Brand it must be "all in all or not at all," and the combined plans receive his unsparing condemnation.

WILLIAM OSLER.

Medical Items.

—Dr. Roseburgh of Hamilton is the President of the Ontario Medical Association for the coming year.

—After a service of twenty-two years, Dr. Graily Hewitt has resigned the chair of Obstetrics and Gynæcology in University College, London.

—Dr. Karl Pawlick of Vienna has been appointed Professor of Obstetrics and Gynæcology in the Bohemian University at Prague.

—Prof. Henoch of Berlin has been obliged, on account of ill-health, to resign the Directorship of the University Clinic for Diseases of Children.

—Prof. Senator succeeds Prof. Henoch. The former is especially known by his excellent work on the Nature and Treatment of Albuminuria.

—Dr. Alexander Ecker, Professor of Anatomy in the University of Freiburg, is dead. Prof. Ecker is well known, especially for his work on the Convolutions of the Human Brain. This work has been translated into English by John C. Galton.

—The following have been appointed examiners of the Ontario Medical Council for the year 1888 :—*Anatomy*, Dr. Grasett, Toronto; *Practice of Medicine*, Dr. Irwin, Kingston; *Midwifery*, Dr. McArthur, London ; *Physiology and Histology*, Dr. H. P. Wright, Ottawa ; *Surgery*, Dr. I. H. Cameron, Toronto ; *Medical and Surgical Anatomy*, Dr. J. Wishart, London; *Chemistry*, Dr. R. A. Reeve, Toronto ; *Materia Medica*, Dr. H. McKay, Ingersoll ; *Medical Jurisprudence*, Dr. Elliott, Orillia.

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The Montreal medical journal

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